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MARCH 1972

# WORLD DATA CENTER A

## Rockets and Satellites



## CATALOGUE OF DATA

VOLUME I

PART A. SOUNDING ROCKETS

7 MARCH 1947 - 31 DECEMBER 1971

CASE FILE
COPY

# WORLD DATA CENTER A

National Academy of Sciences

2101 Constitution Avenue, N.W. Washington, D.C. 20418 U.S.A.

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World Data Center A consists of the Coordination Office and nine subcenters:

World Data Center A
Coordination Office
National Academy of Sciences
2101 Constitution Avenue, N.W.
Washington, D.C. 20418 U.S.A.
Telephone (202) 961-1478

Geomagnetism, Seismology, and Gravity:

World Data Center A:
Geomagnetism, Seismology, and Gravity
Environmental Data Service
National Oceanic and Atmospheric Administration
Boulder, Colorado 80302 U.S.A.
Telephone (303) 499-1000, Ext. 6467

Glaciology:

World Data Center A:
Glaciology
U.S. Geological Survey
1305 Tacoma Avenue South
Tacoma, Washington 98402 U.S.A.
Telephone (206) 383-2861, Ext. 384

Longitude and Latitude:

World Data Center A:
Longitude and Latitude
U.S. Naval Observatory
Washington, D.C. 20390 U.S.A.
Telephone (202) 254-4547

Meteorology (and Nuclear Radiation):

World Data Center A:
Meteorology
National Climatic Center
Asheville, North Carolina 28801 U.S.A.
Telephone (704) 254-0961

Oceanography:

World Data Center A:
Oceanography
National Oceanic and Atmospheric Administration
Rockville, Maryland 20852 U.S.A.
Telephone (202) 426-9057

Rockets and Satellites:

World Data Center A:
Rockets and Satellites
Goddard Space Flight Center
Code 601
Greenbelt, Maryland 20771 U.S.A.
Telephone (301) 982-6695

Solar and Interplanetary Phenomena, Ionospheric Phenomena, Flare-Associated Events, Aurora, Cosmic Rays, Airglow:

World Data Center A:
Upper Atmosphere Geophysics
National Oceanic and Atmospheric Administration
Boulder, Colorado 80302 U.S.A.
Telephone (303) 499-1000, Ext. 6467

Tsunamis:

World Data Center A:
Tsunamis
National Oceanic and Atmospheric Administration
P.O. Box 3887
Honolulu, Hawaii 96812 U.S.A.
Telephone (808) 546-5698

Upper Mantle Project:

World Data Center A:
Upper Mantle Project
Lamont-Doherty Geological Observatory
Palisades, New York 10964 U.S.A.
Telephone (914) 359-2900, Ext. 209

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Notes: (1) World Data Centers conduct international exchange of geophysical observations in accordance with the principles set forth by the International Council of Scientific Unions. WDC-A is established in the United States under the auspices of the National Academy of Sciences.

(2) Communications regarding data interchange matters in general and World Data Center A as a whole should be addressed to: World Data Center A, Coordination Office (see address above).

(3) Inquiries and communications concerning data in specific disciplines should be addressed to the appropriate subcenter listed above.

# WORLD DATA CENTER A

# ROCKETS AND SATELLITES

# CATALOGUE OF DATA

## VOLUME I

## PART A. SOUNDING ROCKETS

Data Received by

WDC-A for Rockets and Satellites

For the Period

7 March 1947 - 31 December 1971

World Data Center A
Rockets and Satellites
Code 601
Goddard Space Flight Center
Greenbelt, Maryland 20771 U.S.A.

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March 1972

# FOREWORD

World Data Centers (WDCs) conduct international exchange of geophysical observations in accordance with the principles set forth by the International Council of Scientific Unions (ICSU). WDC-A in the U.S.A., WDC-B in the U.S.S.R., and WDC-C in Western Europe, Australia, and Japan were established in 1957 by the IGY Committee (CSAGI), as part of the fundamental planning for the International Geophysical Year program, to collect data from the numerous and widespread IGY observational programs and to make such data readily accessible to interested scientists and scholars for an indefinite period of time. This system for exchanging geophysical data was found to be very effective, and the operations of the World Data Centers were extended by ICSU on a continuing basis to other international programs. The WDCs were under the supervision of the Comité International de Géophysique (CIG) for the period 1960 to 1967; they are now supervised by the ICSU Panel on World Data Centers.

Within this framework, the responsibility for detailed guidance of international data exchange and WDCs in the solar-terrestrial disciplines has been given to the Inter-Union Commission on Solar-Terrestrial Physics (IUCSTP). This has been implemented through IUCSTP Working Group 1 on Monitoring of the Solar-Terrestrial Environment by the formation of a permanent panel on STP-WDC operations.

Since the beginning of the World Data Center System, the basic principles guiding the WDCs have been set forth in the introductory section of the Guide to International Exchange of Geophysical Data through the World Data Centers, adopted by CIG in August 1963. Several sections of the CIG Guide have been superseded by revisions adopted and published by various ICSU committees and commissions and other international organizations. The ICSU Panel on World Data Centers plans to issue a consolidated revised Guide in 1972.

The objectives of having several World Data Centers for the collection of observational data are: (1) to insure against loss of data by the catastrophic destruction of a single center and (2) to meet the geographical convenience of, and provide easy communication for, workers in different parts of the world. Each WDC is responsible for: (1) endeavoring to collect a complete set of data in the field or discipline for which it is responsible, (2) safekeeping of the incoming data, (3) correctly copying and reproducing data and maintaining adequate standards of clarity and durability, (4) supplying copies to other WDCs of data not received directly, (5) preparing catalogues of all data in its charge, and (6) making data in the WDCs available to the scientific community.

The World Data Centers collect data and publications for the following disciplines: airglow; aurora; cosmic rays; geomagnetism; glaciology; gravimetry; ionosphere; longitude and latitude; meteorology; nuclear radiation; oceanography; rockets and satellites; seismology; solar activity; tsunami; and the Upper Mantle Project (UMP) disciplines (recent movements of the earth's crust, paleomagnetism, volcanology, geochemistry, properties of rocks under high pressure and temperatures, geothermics, and deep drilling). At the present time, there are no WDC-Cs for longitude and latitude, meteorology, oceanography, tsunami, or the Upper Mantle Project. There are two WDC-Cs for airglow, cosmic rays, geomagnetism, ionosphere, and nuclear radiation: one in Western Europe (WDC-C1) and one in Japan (WDC-C2). There are several WDCs for solar activity that collect and analyze data for specific solar activity projects.

In planning for the various scientific programs, decisions on data exchange were made by the scientific community through the international scientific unions and committees. In each discipline the specialists themselves determined the nature and form of data exchange, based on their needs as research workers. Thus, the type and amount of data in the WDCs differ from discipline to discipline.

## World Data Center A

World Data Center A, for which the U.S. National Academy of Sciences through the Geophysics Research Board (GRB) and its Committee on Data Interchange and Data Centers has overall responsibility, consists of the WDC-A Coordination Office and nine subcenters at scientific institutions in various parts of the United States. The GRB periodically reviews the activities of WDC-A and has conducted several studies on the effectiveness of the WDC system. As a result of these reviews and studies, some of the subcenters of WDC-A have been relocated so that they can more effectively serve the scientific community. Several of the discipline centers of WDC-A dealing with the upper atmosphere were consolidated in the WDC-A for Upper Atmosphere Geophysics during the period 1 July 1966 to 1 July 1968. The WDC-A for Rockets and Satellites was moved from the National Academy of Sciences to a location adjacent to the National Space Science Data Center (NSSDC) at NASA Goddard Space Flight Center on 1 January 1969. (Because of its proximity to NSSDC, this WDC-A subcenter can effectively cooperate with NSSDC in obtaining reduced and analyzed data to satisfy requests from the scientific community for data required for research projects.) The WDC-A for Tsunamis was moved from the National Oceanic and Atmospheric Administration (NOAA)* in Rockville, Maryland, to NOAA in Honolulu, Hawaii, in May 1969. In

*Formerly Environmental Science Services Administration.

October 1970, the WDC-A for Glaciology was moved from the American Geographical Society in New York City to a location adjacent to the U.S. Geological Survey Project Office for Glaciology in Tacoma, Washington. The current addresses of all WDC-As are given inside the front cover.

The data received by the WDC-As are made available to the scientific community in various ways: (1) reports containing data and results of experiments have been compiled, published, and widely distributed; (2) synoptic type data on cards, microfilm, or tables are available for use at the subcenters and for loan to scientists; (3) copies of data and reports are provided upon request.

## International Exchange of Rocket and Satellite Data

International agreements concerning international exchange of rocket and satellite data through the World Data Centers were adopted by the Committee on Space Research (COSPAR) in May 1962 and were published in COSPAR Information Bulletin No. 9, Part I, July 1962. The "COSPAR Guide to Rocket and Satellite Information and Data Exchange" was incorporated in full by CIG into the overall "Guide to International Data Exchange through the World Data Centers for the period 1960-onwards" (published in November 1963). These agreements were modified to include recommendations for improving the exchange of information and data, and a revised "COSPAR Guide to Rocket and Satellite Information and Data Exchange" was adopted by COSPAR in July 1967 and was published in COSPAR Transactions No. 4, Part I, December 1967.

The current plans for continued international exchange of solar-terrestrial data through the WDCs are set forth in the STP NOTES No.6, "Guide for International Exchange of Data in Solar-Terrestrial Physics," which was adopted by IUCSTP in 1969.

The World Data Center A for Rockets and Satellites collects and exchanges reports of sounding rocket launches; reports of satellite and space probe launchings; descriptive information on spacecraft experiments; scientific reports on results of experiments that receive a limited distribution; data supporting conclusions when not included in the published reports; and precise positional observations, orbital elements, and ephemerides that are of great scientific interest and value. Original (raw) data or calibrated (reduced or analyzed) data are not normally deposited in the subcenters for rockets and satellites. Data related to rocket and satellite launchings are normally summarized biannually in the World Data Center A Rockets and Satellites Catalogue of Data, which also includes a listing of documents received by this subcenter during the 6-month reporting period.

This issue of the WDC-A Catalogue is being published in two volumes. Volume I (this volume) is composed of Part A, and Volume II is composed of Parts B and C. Part A, Sounding Rockets, is a cumulative listing of all scientifically successful rockets that have been identified from various sources. The listing starts with the V-2 rocket launched on 7 March 1947 and contains all rockets that have been identified up to 31 December 1971. Because this is the first cumulative WDC-A Catalogue of rocket launchings, there may be omissions and errors in it. Please send any additions or corrections to the listing to:

World Data Center A:
Rockets and Satellites
Goddard Space Flight Center
Code 601
Greenbelt, Maryland 20771 U.S.A.

Part B, Artificial Earth Satellites and Space Probes, and Part C, Reports and Reprints, contain cumulative information for the time period from 1 January 1970 to 31 December 1971.

Scientific organizations and individual scientists may order documents directly from the WDC-A for Rockets and Satellites or through their national organization responsible for communication with the centers. Scientists may borrow materials from the subcenter whenever duplicate copies are available. If duplicate copies are not available, copies of the original material will be made for the requester at a cost not to exceed the cost of copying and transmittal. The subcenter also provides facilities for scientists who wish to participate in the on-site study of data. Advance notice of such a visit enables the staff to provide better services to the data user.

## Catalogues of Rocket and Satellite Data

The WDC-A Catalogue of rocket and satellite data will continue to be published biannually through August 1972. A complete listing of all catalogues published by WDC-A for Rockets and Satellites follows.

| Catalogues of Data Received During the Period: | |
|---|---|
| 1 July 1957 - 31 December 1961 | The first compilation of data prepared and submitted to COSPAR (April 1962) |
| 1 January 1962 - 31 December 1963 | The second compilation of data prepared and submitted to COSPAR (January 1964) |

| | |
|---|---|
| 1 January 1964 - 31 December 1965 | The third compilation of data prepared and submitted to COSPAR (March 1966) |
| 1 January 1966 - 31 December 1967 | The fourth compilation of data prepared and submitted to COSPAR (March 1968) |
| 1 January - 31 December 1968 | The fifth compilation of data prepared and submitted to COSPAR (March 1969) |
| 1 January - 30 June 1969 | The sixth compilation of data prepared and submitted to COSPAR (July 1969) |
| 1 July - 31 December 1969 | The seventh compilation of data prepared and submitted to COSPAR (March 1970) |
| 1 January - 30 June 1970 | The eighth compilation of data prepared and submitted to COSPAR (July 1970) |
| 1 July - 31 December 1970 | The ninth compilation of data prepared and submitted to COSPAR (March 1971) |
| 1 January - 30 June 1971 | The tenth compilation of data prepared and submitted to COSPAR (August 1971) |
| 7 March 1947 - 31 December 1971 | This catalogue (March 1972) |

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# A. SOUNDING ROCKETS

The following cumulative listing of sounding rocket launchings has been compiled from reports of sounding rocket launchings, National Reports to COSPAR, and publications contained in scientific literature. Only launchings in which the rockets and experiments were completely or partially successful are included in this listing. A sample Report of Sounding Rocket Launching, which illustrates the type of information available in the reports submitted to World Data Centers, is shown in Figure 1.

The cumulative listing is a time-ordered output from an automated rocket information file* that is maintained on magnetic tape so that sorting, selecting, updating, and report generation can be easily accomplished. The format of the listing is the same as that used in the WDC-A Sounding Rocket Launching Report (SRL), a monthly publication that includes launches that had successful rocket and experiment performances and that were added to the file during the month. Part A of this Catalogue is divided into three sections: (1) a list of all identified rocket launches from 7 March 1947, (2) a list of the names and addresses of the various rocket principal investigators, and (3) a list of launch sites.

The rocket file from which this listing was prepared is capable of providing six major blocks of information that are described in the following paragraphs. There are 20 specific file entries that go into making up these six blocks. The 20 entries are listed in Table 1, and all entries except the free-text remarks entry can be searched and sorted.

1. Rocket Identification Numbers and Launch Sites. A standard rocket identification number has been adopted for file use. This number uses the UT date of launch and a unique, sequentially assigned, two-digit serial number. The standard identification number is preceded by an R to identify it as a rocket. The coded key is written RYYMM-DDSS; thus, the tenth flight on 31 December 1973 would be designated R7312-3110 with year, month, day, and serial number indicated

*For further information see "The National Space Science Data Center Guide to International Rocket Data," L. L. Dubach, Goddard Space Flight Center, X-601-72-2, January 1972. Copies of this document can be obtained from

National Space Science Data Center
Goddard Space Flight Center (Code 601)
Greenbelt, Maryland 20771 U.S.A.

AFCRL

REPORT OF SOUNDING ROCKET LAUNCHING

Vehicle No.: A04.004-2 **Rocket Type:** Aerobee 170 **Launching Site:** White Sands Missile Range, New Mexico

Range No.: A04.004-2 Lat.: 32° 24'N

Long.: 106° 21'W

AFCRL Project Scientist: Dr. R.W. Walker

Experimenter and Location: Dr. R.W. Walker, AFCRL, L.G. Hanscom Field, Bedford, Mass. 01730

OBJECTIVES AND INSTRUMENTATION:

OBJECTIVES: To investigate natural radiation which is emitted by the celestial sphere.

INSTRUMENTATION: The payload consisted of Hi-Star and stellar aspect sensors, ACS with stellar tracker, telemetry, and associated support instrumentation.

REMARKS:

**Launching Date:** 3 April 1971 **Time:** 0250 MST **Peak Altitude:** 158 Km.* ( 98 st. mi.)

Rocket Performance: The rocket performance objectives were achieved.

Instrumentation Performance: Good

PRELIMINARY EXPERIMENTAL RESULTS:

Good experimental results were obtained and a successful recovery was made.

COMMENTS AND RECOMMENDATIONS:

* Based on plotboard data. Not to be considered final.

Prepared: 5 April 1971

Figure 1. Sample Launch Report

Table 1. Rocket File Entries

Rocket Identification Code
Data Availability Indicator Code
Agency Rocket Designation
Project Name
Date Rocket Launch First Identified (MMYY)
Rocket Experimenters and Affiliations
Launch Date (YYMMDD)
Universal Time of Launch (HHMM)
Launch Site Code
Launch Country/Region Code
Latitude } For Ships Only
Longitude }
Rocket Performance Code
Experiment Performance Code
Peak Altitude (km)
Sponsoring Country/Region Code
Experiment Discipline Code
Instrumentation Code
Event Descriptor Code
Rocket Type
Remarks

in that order using two digits each. This assigned serial number resolves any ambiguities that might arise from identical firing times. When the UT day of an identified rocket launch is unknown, information on the rocket is kept in a temporary file. The file entry is transferred to the regular file when the UT day of launch is identified.

The file also includes the launch site, the UT time of launch, the rocket identification assigned by the sponsoring agency, the rocket type or name, and any project name associated with the launch. When the launch site is on board a ship, the coordinates of the ship location at time of launch are included. A list of the launch sites identified to date appears in Table 2. When launch sites have changed names or are in close proximity to one another, only one designation is normally used.

2. Sponsors and Experimenters. All experimenters at the time of launch are listed along with the country (and agency when needed) that sponsored or funded the launch. The current addresses of scientists and institutions conducting scientific experiments using sounding rockets follow the list of rocket launches.

3. Experiment Discipline. The scientific disciplines with which the experiments are concerned are coded, as well as can be determined, from the information provided by the sponsoring country. The disciplines have been divided into 10 general categories, each of which may have up to 16 subcategories (Table 3). (Note that in the Atmospheric Physics category subcategories V, Y, and Z have been specially designated because they are frequently used techniques, and each can be used to observe one or more of the other subcategories listed.)

4. Instrumentation. Where possible, the type of instrumentation used on a particular rocket flight is entered into the file from a standard list of instruments. In preparing this list, the instrument energy converter or sensor function has been emphasized, and the collimating, concentrating, selecting, comparing, and amplification characteristics have been largely ignored. Table 4 shows the list presently in use.

5. Performance Results. The performance of the rocket and the performance of the experiment are listed categorically as a success, partial success, or failure. The apogee heights are also listed.

6. Miscellaneous. There are spaces in the file for three other entries. (1) If rocket-borne observations were made concurrently with an important geophysical or other event, an appropriate identification of the event can be made. (2) A record is kept, for internal use, of the date of initial entry of data on each rocket into the file. (3) Space for free-text remarks is available.

Table 2. Launch Site Index*

| Launch Site | Geographical Coordinates | | International Zone Time |
|---|---|---|---|
| | Latitude | Longitude | |
| Akita, Japan | 39°34'N | 140°04'E | UT + 9 |
| Alaska Rocket Range, Alaska, United States | 65°06'N | 147°30'W | UT - 10 |
| Andoya, Norway | 69°18'N | 016°01'E | UT + 1 |
| Antigua, BWI | 17°09'N | 061°47'W | UT - 4 |
| Arecibo (Vega Baja), Puerto Rico | 18°30'N | 066°50'W | UT - 4 |
| Arenosello (Huelva), Spain | 37°06'N | 006°44'E | UT + 1 |
| Ascension Island, United Kingdom | 07°59'S | 014°25'W | UT 0 |
| Atlantic Missile Range, Florida, United States | 28°27'N | 080°32'W | UT - 5 |
| Barking Sands (Kauai), Hawaii, United States | 22°04'N | 159°46'W | UT - 11 |
| Barter Island, Alaska, United States | 70°07'N | 143°38'W | UT - 10 |
| Cape Canaveral, Florida, United States | 28°27'N | 080°32'W | UT - 5 |
| Cape Karikari, New Zealand | 34°00'S | 173°30'E | UT + 12 |
| Cape Kennedy, Florida, United States | 28°27'N | 080°32'W | UT - 5 |
| Cape Parry, N.W. Terr., Canada | 70°10'N | 124°43'W | UT - 8 |
| Carnarvon, Australia | 24°30'S | 113°24'E | UT + 8 |
| Cassino, Brazil | 32°12'S | 052°10'W | UT - 3 |
| Chamical, Argentina | 30°20'S | 066°19'W | UT - 4 |
| Coronie, Surinam | 05°51'N | 056°18'W | UT - 4 |
| Dumont d'Urville, Antarctica | 64°40'S | 140°01'E | UT + 9 |
| East Quoddy, Nfld., Canada | 44°54'N | 063°25'W | UT - 4 |
| Eastern Test Range, Florida, United States | 28°27'N | 080°32'W | UT - 5 |
| Eglin AFB (Panama City), Florida, United States | 30°23'N | 086°42'W | UT - 6 |
| Fairbanks, Alaska, United States | 64°48'N | 147°38'W | UT - 10 |
| Fort Churchill, Manitoba, Canada | 58°44'N | 093°49'W | UT - 6 |
| Fort Sherman (Canal Zone), United States | 09°20'N | 079°59'W | UT - 5 |

*Launch sites used only to launch synoptic meteorological sounding rockets are not included in this list.

Table 2. (continued)

| Launch Site | Geographical Coordinates | | International Zone Time |
|---|---|---|---|
| | Latitude | Longitude | |
| Fort Wainwright, Alaska, United States | 64°48'N | 147°38'W | UT - 10 |
| Hammaguir (Colomb Bechar), Algeria | 30°54'N | 003°05'W | UT 0 |
| Holloman, New Mexico, United States | 32°24'N | 106°32'W | UT - 7 |
| Ile du Levant, France | 43°03'N | 006°28'E | UT 0 |
| Johnston Island, United States | 16°45'N | 169°31'W | UT - 11 |
| Kagoshima, Japan | 31°15'N | 131°04'E | UT + 9 |
| Kapustin Yar, Astrakhan, U.S.S.R. | 48°31'N | 045°48'E | UT + 4 |
| Karystos, Greece | 38°01'N | 024°25'E | UT + 2 |
| Keweenaw, Michigan, United States | 47°26'N | 087°43'W | UT - 6 |
| Kheisa Island, U.S.S.R. | 80°27'N | 058°03'E | UT + 5 |
| Kiruna, Sweden | 68°00'N | 021°00'E | UT + 1 |
| Koroni Beach, Greece | 36°46'N | 021°57'E | UT + 2 |
| Kourou (Guyane), French Guiana | 05°12'N | 052°44'W | UT - 4 |
| Kronogard, Sweden | 66°13'N | 019°47'E | UT + 1 |
| Kwajalein, Marshall Islands | 08°44'N | 167°44'E | UT + 12 |
| Lapan Space Center (Tjililitan), Indonesia | 06°16'S | 106°52'E | UT + 7 |
| Mar Chiquita, Argentina | 37°45'S | 057°25'W | UT - 4 |
| Mar Del Plata, Argentina | 38°00'S | 058°00'W | UT - 4 |
| Molodezhnaya, Antarctica | 67°40'N | 045°51'E | UT - 3 |
| Natal, Brazil | 05°52'S | 035°23'W | UT - 3 |
| Obachi, Aomori, Japan | 40°42'N | 141°44'E | UT + 9 |
| Pacific Missile Range, Calif., United States | 34°38'N | 120°32'W | UT - 8 |
| Plesetsk, Arkhangelsk, U.S.S.R. | 65°42'N | 040°21'E | UT + 4 |
| Point Arguello (Lompoc), Calif., United States | 34°37'N | 120°35'W | UT - 8 |
| Point Barrow, Alaska, United States | 71°20'N | 156°47'W | UT - 10 |
| Point Mugu (Oxnard), Calif., United States | 34°07'N | 119°07'W | UT - 8 |
| Primrose Lake, Alberta, Canada | 54°45'N | 110°03'W | UT - 7 |

Table 2. (continued)

| Launch Site | Geographical Coordinates | | International Zone Time |
|---|---|---|---|
| | Latitude | Longitude | |
| Reggane, Algeria | 26°43'N | 000°10'E | UT 0 |
| Resolute Bay, N.W. Terr., Canada | 74°42'N | 094°54'W | UT - 6 |
| San Marco Platform, Kenya | 02°56'S | 040°13'E | UT + 3 |
| Sardinia, Italy | 39°56'N | 009°24'E | UT + 1 |
| Ship Croatan, United States | | | |
| Sonmiani (Karachi), Pakistan | 25°12'N | 066°45'E | UT + 4 |
| South Uist, Scotland | 57°22'N | 007°20'W | UT + 1 |
| Tartagul, Argentina | 22°46'S | 063°49'W | UT - 4 |
| Test Center of Landes, France | 44°16'N | 003°36'W | UT + 1 |
| Thumba (Trivandrum), India | 08°32'N | 076°52'E | UT + 5 |
| Tonopah Test Range, Nevada, United States | 38°00'N | 116°30'W | UT - 8 |
| Tyuratam, Kazakhstan, U.S.S.R. | 45°38'N | 063°16'E | UT + 4 |
| Vandenberg AFB (Lompoc), Calif., United States | 34°38'N | 120°32'W | UT - 8 |
| Volgograd, U.S.S.R. | 48°31'N | 045°48'E | UT + 4 |
| Wallops Island, Virginia, United States | 37°50'N | 075°29'W | UT - 5 |
| Western Test Range (Lompoc), Calif., United States | 34°38'N | 120°32'W | UT - 8 |
| White Sands Missile Range, New Mexico, United States | 32°24'N | 106°32'W | UT - 7 |
| Woomera, Australia | 31°58'S | 136°31'E | UT + 9 |
| Yuma, Arizona, United States | 32°52'N | 114°19'W | UT - 7 |

Table 3. Rocket Discipline Codes

1. Aurora and Airglow
   - A. Deleted
   - B. Auroral emissions
   - C. Airglow emissions
   - D. Auroral/airglow composition
   - E. Atmospheric radiations
   - X. Subdiscipline unknown

2. Atmospheric Physics
   - A. Winds and diffusion
   - B. Pressure
   - C. Temperature
   - D. Albedo
   - E. Planetary radiations
   - F. Neutral density
   - G. Neutral composition
   - H. Electromagnetic waves
   - I. Acoustics
   - J. Meteorological applications
   - K. Noctilucent clouds
   - L. Absorption/scattering
   - V. Vapor trail or chemical release
   - X. Subdiscipline unknown
   - Y. Falling sphere
   - Z. Grenades

3. Ionosphere
   - A. Wave propagation
   - B. Currents and fields
   - C. Ion/electron density
   - D. Ion composition
   - E. Ion/electron temperature
   - F. Ion production/recombination
   - G. Ionospheric motions
   - X. Subdiscipline unknown

4. Energetic Particles
   - A. Galactic or solar cosmic rays
   - B. Deleted
   - C. Trapped radiation
   - D. Precipitating particles
   - X. Subdiscipline unknown

5. Magnetic and Electric Fields
   - A. Electric fields
   - B. Magnetic fields
   - C. Other
   - X. Subdiscipline unknown

6. Solar Physics
   - A. Radio (>1mm)
   - B. Infrared (.8-1000μ)
   - C. Visible (3000-8000A)
   - D. Ultraviolet (2000-3000A)
   - E. Extreme UV (100-2000A)
   - F. X rays (.001-100A)
   - G. Gamma rays (<.001A)
   - X. Subdiscipline unknown

7. Astronomy
   - A. Radio (>1mm)
   - B. Infrared (.8-1000μ)
   - C. Visible (3000-8000A)
   - D. Ultraviolet (2000-3000A)
   - E. Extreme UV (100-2000A)
   - F. X rays (.001-100A)
   - G. Gamma rays (<.001A)
   - X. Subdiscipline unknown

8. Planetology
   - A. Micrometeorites
   - B. Zodiacal light or gegenschein
   - C. Gravity
   - D. Terrain photographs
   - X. Subdiscipline unknown

9. Biology
   - X. Subdiscipline unknown

0. Rocket/Satellite Test and Other
   - A. Performance
   - B. Communication systems
   - C. Experiment test/development
   - D. Engineering experiments
   - E. Other
   - X. Subdiscipline unknown

Table 4. Instruments

Accelerometer
Acoustic Probe
Air Sampler
Alphatron
Bayard-Alpert Gauge
Biological Material
Cadmium Sulfide Cell
Camera
Cerenkov Detector
Chaff
Chemical Release
Coronograph
Electric Field Meter
Electrometer
Electrostatic Analyzer
Falling Sphere
Faraday Cup
Geiger-Mueller Counter
Grenade
Hygrometer
Impedance Probe
Ion Spectrometer
Ion Trap
Ionization Chamber
Langmuir Probe
Magnetic Spectrometer
Magnetometer
Mass Spectrometer
Micrometeoroid Detector
Monochrometer
Neutral Temperature Sensor
Nuclear Emission
Omegatron
Ozone Detector
Parachute Borne Instrument
Photometer
Pitot Tube
Pressure Gauge
Proportional Counters
Proton Detector
Radar
Radio Frequency Receiver
Radio Propagation Experiment
Radiometer
Recovery Required
Redhead Gauge
Scintillator
Solid State Detector
Spectrometer - Spectrograph
VLF Experiment
X-Ray Detector

As mentioned previously, the cumulative listing of sounding rocket launchings is ordered by date and time. The rocket file can be searched and ordered by all of the 20 entries except the free-text remarks entry. WDC-A for Rockets and Satellites can produce reports sorted by categories such as scientific discipline, type of instrumentation, and principal experimenter if such reports are needed by the scientific community. In order to maintain the rocket file in as complete and correct a condition as possible, please send any corrections, additions, or suggestions for different types of reports to

World Data Center A
Rockets and Satellites
Goddard Space Flight Center
Code 601
Greenbelt, Maryland 20771 U.S.A.

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/07/47 | 1823 | V2 | UNITED STATES | WHITE SANDS | | | C A | | | | | | | | N/A | SEDDON, J.C. |
| 01/22/48 | 2014 | V2 | UNITED STATES | WHITE SANDS | | | C A | | | | | | | | 159 | SEDDON, J.C. |
| 08/06/48 | 0137 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 69 | UNKNOWN |
| 01/28/49 | | V2 | UNITED STATES | WHITE SANDS | | | A C | | | | | | | | 61 | SEDDON, J.C. |
| 03/17/49 | 2320 | A10 | | 10D 48'S 089D 14'W | | | B | | | | | | | | 105 | UNKNOWN |
| 03/22/49 | 1720 | A11 | | 11D 06'S 088C 26'W | | | B | | | | | | | | 105 | UNKNOWN |
| 09/20/49 | 1700 | V2-49 | UNITED STATES | WHITE SANDS | | | C A | | | | | | | | 151 | SEDDON, J.C. |
| 09/29/49 | 1700 | | UNITED STATES | WHITE SANDS | | | C | | | | | | | | 275 | UNKNOWN |
| 05/11/50 | 2300 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 66 | UNKNOWN |
| 05/11/50 | 2300 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 66 | UNKNOWN |
| 05/12/50 | 0300 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 61 | UNKNOWN |
| 06/20/50 | 1540 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 72 | UNKNOWN |
| 06/20/50 | 1540 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 77 | UNKNOWN |
| 08/20/50 | 0700 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 59 | UNKNOWN |
| 09/08/50 | 0700 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 59 | UNKNOWN |
| 09/10/50 | 0700 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 62 | UNKNOWN |
| 11/21/50 | 1718 | VIKING 112471 | UNITED STATES | WHITE SANDS | | | A C | | | | | | | | 172 | SEDDON, J.C. |
| 06/07/51 | | AEROBEE | UNITED STATES | WHITE SANDS | | V | | | | F | | | | | N/A | UNKNOWN |
| 07/25/51 | | AEROBEE | UNITED STATES | WHITE SANDS | C | | | | | | | | | | N/A | UNKNOWN |
| 08/07/51 | | AEROBEE | UNITED STATES | WHITE SANDS | | | A | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/30/51 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | A | N/A | UNKNOWN |
| 09/13/51 | | AEROBEE | UNITED STATES | WHITE SANDS | | B C F | | | | | | | | | N/A | UNKNOWN |
| 09/13/51 | 1137 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 60 | UNKNOWN |
| 10/17/51 | | AEROBEE | UNITED STATES | WHITE SANDS | | | A | | | | | | | | N/A | UNKNOWN |
| 02/29/52 | | AEROBEE | UNITED STATES | WHITE SANDS | C | | | | | | | | | | N/A | UNKNOWN |
| 04/22/52 | | AEROBEE | UNITED STATES | WHITE SANDS | | | A | | | | | | | | N/A | UNKNOWN |
| 05/15/52 | 0116 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 67 | UNKNOWN |
| 06/30/52 | | AEROBEE | UNITED STATES | WHITE SANDS | C | | | | | | | | | | N/A | UNKNOWN |
| 08/29/52 | 0830 | | UNITED STATES | WHITE SANDS | | | | A | | | | | | | N/A | UNKNOWN |
| 08/29/52 | 1917 | | UNITED STATES | WHITE SANDS | | | | A | | | | | | | N/A | UNKNOWN |
| 10/10/52 | | AEROBEE | UNITED STATES | WHITE SANDS | C | | | | | | | | | | N/A | UNKNOWN |
| 10/22/52 | | AEROBEE | UNITED STATES | WHITE SANDS | | B C F | | | | | | | | | N/A | UNKNOWN |
| 10/22/52 | 1421 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 90 | UNKNOWN |
| 11/06/52 | | AEROBEE | UNITED STATES | WHITE SANDS | C | | | | | | | | | | N/A | UNKNOWN |
| 12/11/52 | 2347 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 75 | UNKNOWN |
| 12/12/52 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | X | | | | | N/A | UNKNOWN |
| 02/18/53 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | A | N/A | UNKNOWN |
| 04/14/53 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | A | N/A | UNKNOWN |
| 04/23/53 | 0933 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 81 | UNKNOWN |
| 05/20/53 | | AEROBEE | UNITED STATES | WHITE SANDS | C | | | | | | | | | | N/A | UNKNOWN |
| 06/26/53 | | AEROBEE | UNITED STATES | WHITE SANDS | | | A | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/01/53 | | AEROBEE | UNITED STATES | WHITE SANDS | | | A | | | | | | | | N/A | UNKNOWN |
| 08/05/53 | 2154 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 44 | UNKNOWN |
| 09/03/53 | 1510 | | UNITED STATES | WHITE SANDS | | | | A | | | | | | | N/A | UNKNOWN |
| 09/29/53 | 0500 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 54 | UNKNOWN |
| 11/03/53 | | AEROBEE | UNITED STATES | WHITE SANDS | | | A | | | | | | | | N/A | UNKNOWN |
| 11/08/53 | 1709 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 44 | UNKNOWN |
| 05/07/54 | 1000 | VIKING-10 | UNITED STATES | WHITE SANDS | | | C<br>A | | | | | | | | N/A | SEDDON, J.C.<br>JACKSON, J.E. |
| 05/11/54 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | A | N/A | UNKNOWN |
| 05/26/54 | 1424 | | USSR | KAPUSTIN YAR | | | C<br>D | | | | | | | | 106 | UNKNOWN |
| 07/14/54 | | AEROBEE | UNITED STATES | WHITE SANDS | | B<br>C<br>F | | | | | | | | | N/A | UNKNOWN |
| 07/19/54 | 1600 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 43 | UNKNOWN |
| 07/19/54 | 1600 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 41 | UNKNOWN |
| 07/25/54 | 1845 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 37 | UNKNOWN |
| 01/21/55 | | AEROBEE | UNITED STATES | WHITE SANDS | | V | | | | | | | | | N/A | UNKNOWN |
| 03/29/55 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | D | | | | | N/A | UNKNOWN |
| 04/08/55 | | NIKE-DEACON | UNITED STATES | WALLOPS ISLAND | | B<br>C<br>F | | | | | | | | | N/A | UNKNOWN |
| 04/21/55 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | A | N/A | UNKNOWN |
| 06/06/55 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | A | N/A | UNKNOWN |
| 06/09/55 | | NIKE-DEACON | UNITED STATES | WALLOPS ISLAND | | B<br>C<br>F | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/24/55 | 1804 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 79 | UNKNOWN |
| 06/24/55 | 1804 | DAN-002 | UNITED STATES | WALLOPS ISLAND | | F | | | | | | | | | 105 | UNKNOWN |
| 09/14/55 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | A | | | N/A | UNKNOWN |
| 09/30/55 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | D | | | | | N/A | UNKNOWN |
| 10/18/55 | 1050 | AEROBEE | UNITED STATES | WHITE SANDS | | F | | | | | | | | | 150 | UNKNOWN |
| 10/25/55 | | AEROBEE | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 12/13/55 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | D | | | | | N/A | UNKNOWN |
| 03/12/56 | | AEROBEE | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 03/14/56 | | AEROBEE | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 04/11/56 | | | UNITED STATES | WHITE SANDS | | V | | | | | | | | | N/A | BEDINGER, J.F. |
| 05/08/56 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | D | | | | | N/A | UNKNOWN |
| 05/16/56 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | A | N/A | UNKNOWN |
| 06/13/56 | | AEROBEE | UNITED STATES | WHITE SANDS | | | X | | | | | | | | N/A | UNKNOWN |
| 06/18/56 | | AEROBEE | UNITED STATES | WHITE SANDS | | | X | | | | | | | | N/A | UNKNOWN |
| 06/21/56 | | AEROBEE | UNITED STATES | WHITE SANDS | | | X | | | | | | | | N/A | UNKNOWN |
| 06/26/56 | | AEROBEE | UNITED STATES | WHITE SANDS | | | X | | | | | | | | N/A | UNKNOWN |
| 06/29/56 | 1909 | NRL-50 | UNITED STATES | WHITE SANDS | | | C<br>A | | | | | | | | 260 | UNKNOWN |
| 07/05/56 | 0752 | NRL-33 | UNITED STATES | WHITE SANDS | X | | | | | | | | | | 163 | UNKNOWN |
| 07/06/56 | | NIKE-CAJUN | UNITED STATES | WALLOPS ISLAND | | B<br>C<br>F | | | | | | | | | N/A | UNKNOWN |
| 07/06/56 | 1800 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 87 | UNKNOWN |
| 07/06/56 | 1800 | AM 6.01 | UNITED STATES | WALLOPS ISLAND | | F | | | | | | | | | 130 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7-8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/30/56 | | AEROBEE | UNITED STATES | WHITE SANDS | C | | | | | | | | | N/A | UNKNOWN |
| 08/08/56 | | NIKE-CAJUN | UNITED STATES | WHITE SANDS | | B C F | | | | | | | | N/A | UNKNOWN |
| 08/09/56 | 1553 | SC-034 | UNITED STATES | WHITE SANDS | | G | | | | | | | | N/A | UNKNOWN |
| 08/10/56 | 1522 | SC-035 | UNITED STATES | WHITE SANDS | | G | | | | | | | | N/A | UNKNOWN |
| 10/20/56 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | N/A | UNKNOWN |
| 10/23/56 | | AEROBEE | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | N/A | UNKNOWN |
| 11/02/56 | | NIKE-CAJUN | UNITED STATES | | | B C F | | | | | | | | N/A | UNKNOWN |
| 11/02/56 | 1840 | | UNITED STATES | WHITE SANDS | | | | | | | | | | 81 | UNKNOWN |
| 11/04/56 | | NIKE-CAJUN | UNITED STATES | | | B C F | | | | | | | | N/A | UNKNOWN |
| 11/04/56 | 1854 | | UNITED STATES | WHITE SANDS | | | | | | | | | | 90 | UNKNOWN |
| 11/07/56 | | NIKE-CAJUN | UNITED STATES | | | B C F | | | | | | | | N/A | UNKNOWN |
| 11/10/56 | | NIKE-CAJUN | UNITED STATES | | | B C F | | | | | | | | N/A | UNKNOWN |
| 11/10/56 | 1517 | | UNITED STATES | WHITE SANDS | | | | | | | | | | 90 | UNKNOWN |
| 11/11/56 | 1700 | NN 03.12 F | CANADA | FORT CHURCHILL | | B C F A | | | | | | | | N/A | LAGOW, H.E. AINSWORTH, J.E. FOX, D.F. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/15/56 | 1932 | | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | | N/A | UNKNOWN |
| 11/17/56 | 1648 | | UNITED STATES | FORT CHURCHILL | | F | | | | | | | | | N/A | UNKNOWN |
| 11/21/56 | 0621 | NN 3.17 | UNITED STATES | FORT CHURCHILL | | | F | | | | | | | | N/A | UNKNOWN |
| 12/13/56 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | A | N/A | UNKNOWN |
| 02/02/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 05/16/57 | 0318 | | USSR | KAPUSTIN YAR | | | C D | | | | | | | | 205 | UNKNOWN |
| 06/18/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | | X | | | | | | | | N/A | UNKNOWN |
| 06/25/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | | X | | | | | | | | N/A | UNKNOWN |
| 07/04/57 | 1815 | NN 3.08F | UNITED STATES CANADA | FORT CHURCHILL | | | C | | | | | | | | 96 | UNKNOWN |
| 07/16/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | A | | | N/A | UNKNOWN |
| 07/22/57 | 0416 | SM 1.02 | UNITED STATES CANADA | FORT CHURCHILL | | J | | | | | | | | | 34 | UNKNOWN |
| 07/23/57 | | NN 7.40F | UNITED STATES | POINT MUGU | | | | | | D F | | | | | 46 | UNKNOWN |
| 07/24/57 | 0529 | SM 1.03 | UNITED STATES CANADA | FORT CHURCHILL | | J | | | | | | | | | 32 | UNKNOWN |
| 07/29/57 | 2159 | NN 3.13F | UNITED STATES CANADA | FORT CHURCHILL | | B C F | | | | | | | | | 82 | UNKNOWN |
| 07/29/57 | 2200 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 12 | UNKNOWN |
| 08/06/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | D | | | | | N/A | UNKNOWN |
| 08/06/57 | 1052 | II 5.03(58) | USSR | MOLODEZHNAYA | B | | | | | | | | | | 45 | UNKNOWN |
| 08/06/57 | 1603 | II 5.04(59) | USSR | MOLODEZHNAYA | | | | | | | | | | | 45 | UNKNOWN |
| 08/08/57 | 0717 | II 5.07(62) | USSR | MOLODEZHNAYA | | | | A | | | | | | | 48 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/10/57 | 0300 | II 5.08(63) | USSR | MOLODEZHNAYA | B | | | | | | | | | | 48 | UNKNOWN |
| 08/10/57 | 2336 | II 5.09(64) | USSR | MOLODEZHNAYA | B | | | | | | | | | | 43 | UNKNOWN |
| 08/12/57 | 1355 | NN 5.13(68) | USSR | MOLODEZHNAYA | B | | | | | | | | | | N/A | UNKNOWN |
| 08/12/57 | 1559 | SM 1.04 | UNITED STATES CANADA | FORT CHURCHILL | | A C | | | | | | | | | 28 | UNKNOWN |
| 08/14/57 | 0806 | NN 5.15(70) | USSR | MOLODEZHNAYA | B | | | | | | | | | | N/A | UNKNOWN |
| 08/14/57 | 1350 | NN 5.16(71) | USSR | MOLODEZHNAYA | B | | | | | | | | | | 45 | UNKNOWN |
| 08/14/57 | 2000 | NN 5.17(72) | USSR | MOLODEZHNAYA | B | | | | | | | | | | 39 | UNKNOWN |
| 08/14/57 | 2251 | NN 5.18(73) | USSR | MOLODEZHNAYA | B | | | | | | | | | | N/A | UNKNOWN |
| 08/20/57 | 0230 | SM 1.05 | UNITED STATES CANADA | FORT CHURCHILL | | A C | | | | | | | | | 35 | UNKNOWN |
| 08/22/57 | 2154 | RPX-1 | UNITED STATES CANADA | FORT CHURCHILL | | | | | | | | | | C | 44 | UNKNOWN |
| 08/25/57 | 0327 | | USSR | KAPUSTIN YAR | | | C D | | | | | | | | 208 | UNKNOWN |
| 08/25/57 | 1408 | SM 2.05 | UNITED STATES CANADA | FORT CHURCHILL | | A C | | | | | | | | | 51 | UNKNOWN |
| 08/28/57 | 2120 | NN 7.44F | UNITED STATES | POINT MUGU | | | | | | D F | | | | | 40 | UNKNOWN |
| 08/29/57 | 2212 | NN 7.45F | UNITED STATES | POINT MUGU | | | | | | D F | | | | | 46 | UNKNOWN |
| 08/31/57 | 0457 | II 6.23F | UNITED STATES CANADA | FORT CHURCHILL | | | | A | A | | | | | | 42 | UNKNOWN |
| 09/01/57 | 2228 | AMC4.001 | UNITED STATES CANADA | FORT CHURCHILL | | B C F | | | | | | | | | 58 | UNKNOWN |
| 09/01/57 | 2228 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 09 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/18/57 | 1854 | NN 7.49F | UNITED STATES | POINT MUGU | | | | | | D F | | | | | N/A | UNKNOWN |
| 09/19/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 09/21/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 10/01/57 | | AEROBEE | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | UNKNOWN |
| 10/14/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | A | | | N/A | UNKNOWN |
| 10/14/57 | 2116 | II 5.54F | UNITED STATES | 02D 16'N 150D 23'W | | C F | | | B | | | | | | 113 | UNKNOWN |
| 10/16/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | A | | | N/A | UNKNOWN |
| 10/16/57 | 2002 | II 5.55F | UNITED STATES | 07D 07'N 155D 38'W | | C F | | | B | | | | | | N/A | UNKNOWN |
| 10/17/57 | 0009 | II 5.56F | UNITED STATES | 06D 28'N 156D 55'W | | C F | | | B | | | | | | N/A | UNKNOWN |
| 10/17/57 | 0218 | II 5.57F | UNITED STATES | 06D 11'N 157D 01'W | | C F | | | B | | | | | | N/A | UNKNOWN |
| 10/17/57 | 2001 | II 5.58F | UNITED STATES | 03D 56'N 158D 07'W | | C F | | | B | | | | | | 51 | UNKNOWN |
| 10/17/57 | 2344 | FL-83 | | 03D 23'N 158D 41'W | | | B | | | | | | | | 127 | UNKNOWN |
| 10/18/57 | 1943 | II 5.61F | UNITED STATES | 00D 48'N 160D 32'W | | C F | | | B | | | | | | 121 | UNKNOWN |
| 10/18/57 | 2343 | FL-86 | | 00D 21'N 160D 52'W | | | B | | | | | | | | 122 | UNKNOWN |
| 10/19/57 | 1850 | FL-87 | | 02D 05'S 161D 05'W | | | B | | | | | | | | 129 | UNKNOWN |
| 10/20/57 | 0106 | II 5.64F | UNITED STATES | 02D 31'S 161D 25'W | | C F | | | B | | | | | | 104 | UNKNOWN |
| 10/25/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/01/57 | 0100 | II S.74F | UNITED STATES | 65D 38'S 177D 38'W | | C F | | | B | | | | | | N/A | UNKNOWN |
| 11/03/57 | 2008 | II S.75F | UNITED STATES | 70D 14'S 175D 42'E | | C F | | | B | | | | | | N/A | UNKNOWN |
| 11/04/57 | 0141 | II S.77F | UNITED STATES | 71D 10'S 176D 08'E | | C F | | | B | | | | | | 97 | UNKNOWN |
| 11/04/57 | 0347 | II S.78F | UNITED STATES | 71D 28'S 176D 45'E | | C F | | | B | | | | | | N/A | UNKNOWN |
| 11/05/57 | 1913 | II S.82F | UNITED STATES | 66D 35'S 174D 37'E | | C F | | | B | | | | | | 97 | UNKNOWN |
| 11/05/57 | 2159 | II S.83F | UNITED STATES | 66D 09'S 174D 41'E | | C F | | | B | | | | | | 100 | UNKNOWN |
| 11/07/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | | C | | | | | | | A | N/A | UNKNOWN |
| 11/10/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 11/13/57 | 1222 | UNKNOWN | AUSTRALIA UNITED KINGDOM | WOOMERA | | Z A | | | | | | | | | 69 | SHEPPARD, P. |
| 11/26/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | V | | | | | | | | | N/A | BEDINGER, J.F. |
| 11/26/57 | | AEROBEE | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 01/25/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | UNKNOWN |
| 01/25/58 | 1912 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 90 | UNKNOWN |
| 01/26/58 | 0419 | NN 3.03 F | CANADA | FORT CHURCHILL | E | | | | X | | D F | | | | 180 | UNKNOWN |
| 01/27/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | UNKNOWN |
| 01/27/58 | 1849 | SM 2.10 | UNITED STATES CANADA | FORT CHURCHILL | | F | | | | | | | | | 143 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/29/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | UNKNOWN |
| 01/29/58 | 1906 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 81 | UNKNOWN |
| 02/22/58 | 0302 | NN 3.18 F | UNITED STATES | FORT CHURCHILL | | | F | | | | | | | | N/A | UNKNOWN |
| 02/23/58 | 1907 | NN 3.19 F | UNITED STATES | FORT CHURCHILL | | | F | | | | | | | | N/A | UNKNOWN |
| 02/24/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | UNKNOWN |
| 03/04/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | UNKNOWN |
| 03/04/58 | 1930 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 95 | UNKNOWN |
| 03/16/58 | 0454 | NN 3.04 F | CANADA | FORT CHURCHILL | E | | | | X | | D F | | | | 144 | UNKNOWN |
| 03/18/58 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | D | | | | | N/A | UNKNOWN |
| 03/22/58 | 0641 | NN 3.05 F | UNITED STATES | FORT CHURCHILL | E | | | | X | | D F | | | | 168 | UNKNOWN |
| 03/24/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | UNKNOWN |
| 05/01/58 | | NIKE-CAJUN | UNITED STATES | WHITE SANDS | | | | | | | | A | | | N/A | UNKNOWN |
| 05/20/58 | | NIKE-CAJUN | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 05/21/58 | | NIKE-CAJUN | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 05/22/58 | | NIKE-CAJUN | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 06/04/58 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | E | | | | | N/A | UNKNOWN |
| 06/26/58 | | EXOS | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | N/A | UNKNOWN |
| 06/30/58 | 0800 | K-06 | JAPAN | AKITA | | Z | | | | | | | | | 60 | HATANAKA, T. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/03/58 | | AEROBEE | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | C | N/A | UNKNOWN |
| 07/06/58 | | AEROBEE | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | C | N/A | UNKNOWN |
| 07/11/58 | | AEROBEE | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | C | N/A | UNKNOWN |
| 07/15/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | UNKNOWN |
| 07/17/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | UNKNOWN |
| 08/02/58 | 0847 | | USSR | | | | D | | | | | | | | 210 | UNKNOWN |
| 08/15/58 | | AEROBEE | UNITED STATES | WHITE SANDS | | | X | | | | | | | | N/A | UNKNOWN |
| 09/15/58 | | NIKE-CAJUN | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 09/16/58 | | NIKE-CAJUN | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 09/18/58 | | NIKE-CAJUN | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 09/25/58 | | EXOS | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | N/A | UNKNOWN |
| 09/25/58 | 0550 | K -C6 -RS-001<br>S -C04 | JAPAN | AKITA | | | | | | | D | | | | N/A | SAITO, K.<br>NISHI, K.<br>KONO, T. |
| 09/25/58 | 1450 | K -C4 -RS-001 | JAPAN | AKITA | | | | | | | | | | | 51 | UNKNOWN |
| 09/26/58 | 1250 | K -C4 -TW-004 | JAPAN | AKITA | | Z | | | | | | | | | 58 | UNKNOWN |
| 10/14/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | | | | | | | A | | | N/A | UNKNOWN |
| 10/14/58 | | AEROBEE | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | UNKNOWN |
| 10/15/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | | | | | | | A | | | N/A | UNKNOWN |
| 10/21/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | A | N/A | UNKNOWN |
| 10/31/58 | 1959 | | UNITED STATES | FORT CHURCHILL | | F | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/16/58 | 0656 | NN 3.06 F | UNITED STATES | FORT CHURCHILL | E | | | | X | | D<br>F | | | | 159 | UNKNOWN |
| 11/23/58 | | NIKE-CAJUN | UNITED STATES | FORT CHURCHILL | | B<br>C<br>F | | | | | | | | | N/A | UNKNOWN |
| 11/28/58 | 1205 | K -C4 -CP-001 | JAPAN | AKITA | | | | A | | | | | | | 40 | UNKNOWN |
| 11/29/58 | 1205 | K -C4 -RS-002 | JAPAN | AKITA | | | | | | | D | | | | 40 | UNKNOWN |
| 11/30/58 | | SPAEROBEE | CANADA | FORT CHURCHILL | | | C | | | | | | | C | N/A | UNKNOWN |
| 11/30/58 | 0400 | K -C6 -CP-002<br>S -C08 | JAPAN | AKITA | | | | A | | | | | | | 49 | TAKEUCHI,H.<br>IMAI,T.<br>OTSUKA,K.<br>NARITA,S.<br>KARIYA,S. |
| 11/30/58 | 1300 | K -C4 -CP-002 | JAPAN | AKITA | | | | A | | | | | | | 49 | UNKNOWN |
| 11/30/58 | 2227 | 08C6.015 | CANADA<br>UNITED STATES | FORT CHURCHILL | | | | | B | | | | | | 152 | UNKNOWN |
| 12/04/58 | 0113 | AL 1 | AUSTRALIA | WOOMERA | | A | | | | | | | | | 78 | UNKNOWN |
| 12/23/58 | 0303 | K -C6 -TW-005<br>S -C09 | JAPAN | AKITA | | Z | | | | | | | | | 59 | MATSUMOTO,H.<br>TAKEYA,Y.<br>OKUMOTO,T. |
| 12/23/58 | 1203 | K -C4 -TW-005 | JAPAN | AKITA | | Z | | | | | | | | | 60 | UNKNOWN |
| 02/11/59 | 2300 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 50 | UNKNOWN |
| 03/10/59 | 1848 | | FRANCE | HAMMAGUIR | | V | | | | | | | | | 100 | UNKNOWN |
| 03/12/59 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | E | | | | | N/A | UNKNOWN |
| 03/12/59 | 0544 | | FRANCE | HAMMAGUIR | | V | | | | | | | | | 100 | UNKNOWN |
| 03/18/59 | 0245 | K -C6 -TW-006<br>S -C11 | JAPAN | AKITA | | Z | | | | | | | | | 50 | MATSUMOTO,H.<br>KIMURA,I.<br>TAKEYA,Y.<br>OKUMOTO,T. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/20/59 | 0250 | K -C6 -TW-C07<br>S -C13 | JAPAN | AKITA | | Z | | | | | | | | | 49 | MATSUMOTO,H.<br>KIMURA,I.<br>TAKEYA,Y.<br>OKUMOTO,T. |
| 03/30/59 | 1501 | AA 03.140C | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 201 | UNKNOWN |
| 04/02/59 | 0700 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 40 | UNKNOWN |
| 04/02/59 | 0700 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 44 | UNKNOWN |
| 04/21/59 | 0105 | AA 03.181C | UNITED STATES | WHITE SANDS | | | C<br>D | | | | | | | | 235 | UNKNOWN |
| 05/12/59 | 1139 | AA C3.200C | UNITED STATES | WHITE SANDS | | V | | | | | | | | | N/A | UNKNOWN |
| 05/14/59 | 1755 | NASA 2.01 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | N/A | MEDROW,K.R. |
| 05/15/59 | 1710 | NASA 2.02 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | N/A | MEDROW,K.R. |
| 05/15/59 | 2210 | NASA 2.03 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | N/A | MEDROW,K.R. |
| 05/22/59 | 1115 | AA C3.201C | UNITED STATES | WHITE SANDS | | V | | | | | | | | | N/A | UNKNOWN |
| 05/27/59 | 0451 | AA 06.161C | UNITED STATES | WHITE SANDS | | F<br>B<br>C | | | | | | | | | 169 | UNKNOWN |
| 05/27/59 | 1950 | AA 06.162C | UNITED STATES | WHITE SANDS | | F<br>B<br>C | | | | | | | | | 177 | UNKNOWN |
| 06/10/59 | 1640 | AA C3.280C | UNITED STATES | WHITE SANDS | | | B | | | | | | | | 235 | UNKNOWN |
| 06/10/59 | 1740 | FL-1959 | | 32D 15'N 115D 50'W | | | B | | | | | | | | 190 | UNKNOWN |
| 06/22/59 | 1432 | AA 01.260C | UNITED STATES | WHITE SANDS | | | | | | B | | | | | 110 | UNKNOWN |
| 06/24/59 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | D | N/A | UNKNOWN |
| 06/24/59 | 1210 | AA C3.220C | UNITED STATES | WHITE SANDS | | | B | | | | | | | | 200 | UNKNOWN |
| 06/30/59 | | ABME 06.208 | UNITED STATES | WALLOPS ISLAND | | | E<br>C | | | | | | | | 83 | UNKNOWN |

| DATE (UT) | TIME (UT) | POCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/01/59 | | ABME 06.209 | UNITED STATES | WALLOPS ISLAND | | | E C | | | | | | | | 985 | UNKNOWN |
| 07/07/59 | | | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | | 1045 | UNKNOWN |
| 07/14/59 | | | USSR | | | | D | | | | | | | | 203 | UNKNOWN |
| 07/21/59 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | A | | | | | | | N/A | UNKNOWN |
| 07/22/59 | | | USSR | | | G | D | | | | | | | | 211 | UNKNOWN |
| 07/24/59 | 1734 | NN 8.67 CF | UNITED STATES | VANDENBURG AFB | | | | | | X | | | | | 227 | KREPLIN,R.W. MCNUTT,D. REPLIN,R.W. MCNUTT,D.P. |
| 08/07/59 | | NASA 2.04 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 22 | SORGNIT,E.F. |
| 08/07/59 | | NASA 2.05 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 50 | SORGNIT,E.F. |
| 08/07/59 | | NASA 2.06 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 104 | SORGNIT,E.F. |
| 08/07/59 | 1805 | NN 8.68 CF | UNITED STATES | VANDENBURG AFB | | | | | | X | | | | | 225 | KREPLIN,R.W. MCNUTT,D. REPLIN,R.W. MCNUTT,D.P. |
| 08/08/59 | | ATLAS-ABLE | UNITED STATES | CAPE KENNEDY | | | | | | | | A | | | N/A | UNKNOWN |
| 08/14/59 | 1700 | NN 8.69 CF | UNITED STATES | VANDENBURG AFB | | | | | | X | | | | | 217 | KREPLIN,R.W. MCNUTT,D. REPLIN,R.W. MCNUTT,D.P. |
| 08/17/59 | 0918 | NASA 3.13 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 236 | MANRING,E.R. BEDINGER,J.F. |
| 08/19/59 | 0034 | NASA 3.14 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 30 | MANRING,E.R. BEDINGER,J.F. |
| 08/22/59 | 0045 | AA 03.101C | UNITED STATES | WHITE SANDS | E | G | | | | | | | | | 230 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/24/59 | 2347 | NN 8.71 CF | UNITED STATES | VANDENBURG AFB | | | | | | X | | | | | N/A | KREPLIN,R.W.<br>MCNUTT,D.<br>REPLIN,R.W.<br>MCNUTT,D.P. |
| 08/28/59 | 1710 | NN 8.72 CF | UNITED STATES | VANDENBURG AFB | | | | | | X | | | | | 214 | KREPLIN,R.W.<br>MCNUTT,D.<br>REPLIN,R.W.<br>MCNUTT,D.P. |
| 08/28/59 | 1845 | AA 03.122C | UNITED STATES | WHITE SANDS | | | C E | | | E | | | | | 235 | UNKNOWN |
| 08/29/59 | | AEROBEE | UNITED STATES | WHITE SANDS | C | | | | | | | | | | N/A | UNKNOWN |
| 08/31/59 | 2353 | NN 8.73 CF | UNITED STATES | VANDENBURG AFB | | | | | | X | | | | | N/A | KREPLIN,R.W.<br>MCNUTT,D.<br>REPLIN,R.W.<br>MCNUTT,D.P. |
| 09/01/59 | 1900 | NN 8.75 CF | UNITED STATES | VANDENBURG AFB | | | | | | X | | | | | 210 | KREPLIN,R.W.<br>MCNUTT,D.<br>REPLIN,R.W.<br>MCNUTT,D.P. |
| 09/11/59 | 1912 | NASA 4.08 GI | UNITED STATES | FORT CHURCHILL | | | A C D E | | | | | | | B | 227 | JACKSON,J.E.<br>BOURDEAU,R.E. |
| 09/14/59 | 1727 | NASA 4.07 GI | UNITED STATES | FORT CHURCHILL | | | A C D | | | | | | | B | 218 | JACKSON,J.E.<br>BOURDEAU,R.E. |
| 09/15/59 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | C | N/A | UNKNOWN |
| 09/16/59 | | THOR | UNITED STATES | CAPE KENNEDY | | | | | | | | A | | | N/A | UNKNOWN |
| 09/17/59 | 1837 | NASA 4.02 II | UNITED STATES | FORT CHURCHILL | | | A C E | | | | | | | A | 256 | HEIKKLA,W.J.A. |
| 09/22/59 | | THOR | UNITED STATES | CAPE KENNEDY | | | | | | | | A | | | N/A | UNKNOWN |
| 09/29/59 | 1059 | AA 06.203C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 124 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/30/59 | 1057 | AA 06.204C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 122 | UNKNOWN |
| 10/01/59 | 1049 | AA 06.210C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 138 | UNKNOWN |
| 10/02/59 | 1100 | AA 06.211C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 143 | UNKNOWN |
| 10/03/59 | 1103 | AA 06.202C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 122 | UNKNOWN |
| 10/08/59 | 2000 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 44 | UNKNOWN |
| 10/08/59 | 2000 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 44 | UNKNOWN |
| 10/09/59 | 0840 | AA 06.209C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 143 | UNKNOWN |
| 10/09/59 | 1117 | AA 06.213C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 116 | UNKNOWN |
| 10/10/59 | 1200 | AA 02.102C | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 111 | UNKNOWN |
| 10/12/59 | 0900 | AA 06.208C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 123 | UNKNOWN |
| 10/12/59 | 1112 | AA 06.206C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 123 | UNKNOWN |
| 10/13/59 | 1117 | AA 06.214C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 116 | UNKNOWN |
| 10/15/59 | 1105 | AA 06.207C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 122 | UNKNOWN |
| 10/16/59 | 1117 | AA 06.215C | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 139 | UNKNOWN |
| 10/20/59 | 1425 | AA 02.240C | UNITED STATES | WHITE SANDS | | | B | | | | | | | | 113 | UNKNOWN |
| 10/23/59 | 1744 | AA 10.184 | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | | 381 | UNKNOWN |
| 10/28/59 | 1447 | AA 10.185C | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | | 135 | UNKNOWN |
| 10/29/59 | | THOR | UNITED STATES | CAPE KENNEDY | | | | | | | | A | | | N/A | UNKNOWN |
| 11/00/59 | | THOR | UNITED STATES | CAPE KENNEDY | | | | | | | | | | | N/A | UNKNOWN |
| 11/06/59 | 1636 | AA 10.187C | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | | 393 | UNKNOWN |
| 11/06/59 | 1925 | NN 2.78C | UNITED STATES | WHITE SANDS | C | | | | | | | | | | 142 | UNKNOWN |
| 11/10/59 | 1200 | STRONGRAM I | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | | N/A | UNKNOWN |
| 11/11/59 | | THOR | UNITED STATES | CAPE KENNEDY | | | | | | | | A | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/18/59 | 1930 | AA 08.241C | UNITED STATES | EGLIN AFB | | | B C | | | | | | | | 206 | UNKNOWN |
| 11/18/59 | 2217 | NASA 3.15 CA | UNITED STATES | WALLOPS ISLAND | | A | | | | | | | | | 250 | MANRING, E. R. BEDINGER, J. F. |
| 11/19/59 | 0744 | AA 03.282C | UNITED STATES | FORT CHURCHILL | | | B | | | | | | | | 106 | UNKNOWN |
| 11/19/59 | 1036 | AA 06.163C | UNITED STATES | FORT CHURCHILL | | Y | | | | | | | | | 132 | UNKNOWN |
| 11/19/59 | 1051 | NASA 3.16 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 255 | MANRING, E. R. BEDINGER, J. F. |
| 11/20/59 | 1916 | AA 06.164C | UNITED STATES | FORT CHURCHILL | | Y | | | | | | | | | 132 | UNKNOWN |
| 11/22/59 | 1835 | AA 10.186C | UNITED STATES | FORT CHURCHILL | | | C E | | | | | | | | 35 | UNKNOWN |
| 12/01/59 | | THOR | UNITED STATES | CAPE KENNEDY | | | | | | | | A | | | N/A | UNKNOWN |
| 12/08/59 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | E | | | | | | | | N/A | UNKNOWN |
| 12/18/59 | | THOR | UNITED STATES | CAPE KENNEDY | | | | | | | | A | | | N/A | UNKNOWN |
| 12/18/59 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | | | | | A | | | N/A | UNKNOWN |
| 12/22/59 | 0756 | NASA 8.01 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | A | | | A | 901 | WINKLER, L. |
| 01/19/60 | 1818 | AA 03.124C | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 210 | UNKNOWN |
| 01/26/60 | 0542 | NASA 8.02 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | A | | | A | 951 | WINKLER, L. |
| 01/29/60 | 1851 | AA 03.125C | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 226 | UNKNOWN |
| 02/11/60 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | | | | | | | | N/A | WALKER, R. G. |
| 02/13/60 | 0043 | AA 02.143C | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 143 | UNKNOWN |
| 02/27/60 | 0648 | AA 04.360C | UNITED STATES | FORT CHURCHILL | | | | | | | B | | | | 117 | UNKNOWN |
| 03/01/60 | 2211 | NASA 3.01 GS | UNITED STATES | WALLOPS ISLAND | | | | | | E F | | | | A | 212 | HALLAM, K. L. |
| 03/03/60 | 2250 | NASA 3.02 GS | UNITED STATES | WALLOPS ISLAND | | | | | | E F | | | | A | 212 | HALLAM, K. L. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/16/60 | 2125 | NASA 6.01 UI | UNITED STATES | FORT CHURCHILL | | | C<br>E | | | | | | | | 387 | SPENCER, N. W.<br>BOURDEAU, R. E. |
| 03/23/60 | 1120 | AL E | AUSTRALIA | WOOMERA | | A | | | | | | | | | 81 | UNKNOWN |
| 03/25/60 | 1840 | NASA 4.12 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | A | | A<br>D | 212 | MEDROW, K. R.<br>BERG, D. S. |
| 04/07/60 | 0206 | AA 03.221 | UNITED STATES | EGLIN AFB | | | | | | B | | | | | 236 | WALKER, R. G. |
| 04/08/60 | 1204 | 0806.003 | UNITED STATES | FORT CHURCHILL | | G | C | | | | | | | | 100 | UNKNOWN |
| 04/19/60 | 0936 | NASA 3.05 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 167 | MANRING, E. R.<br>BEDINGER, J. F.<br>DUBIN, M. |
| 04/19/60 | 1415 | NN 3.60 | UNITED STATES | WHITE SANDS | | | | | | D<br>E | | | | | 222 | PURCELL, J. D.<br>TOUSEY, R.<br>DETWILER, C. R. |
| 04/21/60 | 1500 | AA 03.283C | UNITED STATES | EGLIN AFB | | | | | B | | | | | | 245 | UNKNOWN |
| 04/23/60 | 2145 | NASA 4.10 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 246 | MEDROW, K. R. |
| 04/27/60 | 0418 | NASA 4.04 GG | UNITED STATES | WALLOPS ISLAND | | | | | | | E<br>D | | | | 209 | |
| 04/27/60 | 2156 | NASA 3.03 GS | UNITED STATES | WALLOPS ISLAND | | | | | | E<br>F | | | | A | 24 | HALLAM, K. L. |
| 04/29/60 | 1547 | NASA 4.09 GA | UNITED STATES | WALLOPS ISLAND | B<br>F<br>G | | | | | | | | | | 242 | MEADOWS, E. B.<br>HOROWITZ, R. |
| 05/20/60 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | | | | | | | D | N/A | HUNTER, R. |
| 05/24/60 | | AGENA | UNITED STATES | VANDENBURG AFB | | | C<br>X | | X | | | | | | N/A | SMART, D. F.<br>MCISAAC, J.<br>JURSA, A.<br>SOBERMAN, R.<br>SAGALYN, R. G. |
| 05/25/60 | 0048 | NASA 3.24 CA | UNITED STATES | WALLOPS ISLAND | | A | | | | | | | | | 199 | MANRING, E. R.<br>BEDINGER, J. F. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/25/60 | 0540 | AA 03.183C | UNITED STATES | EGLIN AFB | | | C | | | E | | | | | 269 | UNKNOWN |
| 05/25/60 | 2200 | NASA 3.04 GS | UNITED STATES | WALLOPS ISLAND | | | | | | E | | | | A | 24 | HALLAM, K. L. |
| 05/27/60 | 0405 | NRL-59 | UNITED STATES | WHITE SANDS | | | | | | | E | | | | 193 | CHUBB, T. A.<br>FRIEDMAN, H.<br>PACKER, D. M. |
| 05/27/60 | 0530 | NASA 4.05 GG | UNITED STATES | WALLOPS ISLAND | | | | | | | E | | | | 215 | BOGGESS, A. |
| 06/06/60 | 1710 | NASA 10.17 GE | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | A | 122 | FICHTEL, C. E.<br>DAVIS, L. R. |
| 06/15/60 | | | USSR | | | | C | | | | | | | | N/A | UNKNOWN |
| 06/15/60 | 0343 | | USSR | | | | C | | | | | | | | N/A | UNKNOWN |
| 06/15/60 | 1545 | NC 3.107 | UNITED STATES | WHITE SANDS | | C | | | | | | | | | 224 | HOLMES, J. C.<br>HOFFMAN, J. H.<br>YOUNG, J. M. |
| 06/15/60 | 2256 | NASA 5.02 UI | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | | 321 | SPENCER, N. W.<br>BOURDEAU, R. E. |
| 06/24/60 | 0625 | NASA 4.06 GG | UNITED STATES | WALLOPS ISLAND | | | | | | | E | | | | 211 | BOGGESS, A. 3. |
| 06/27/60 | | NIKE-ASP | UNITED STATES | CAPE KENNEDY | | | C | | | | | | | | N/A | SAGALYN, R. C. |
| 06/27/60 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | X | | | | | | | | N/A | WALKER, R. G. |
| 06/27/60 | 0610 | AA 08.243 | UNITED STATES | EGLIN AFB | | | C | | | | | | | | 170 | SAGALYN, R. C. |
| 06/27/60 | 1315 | NC 3.108 | UNITED STATES | WHITE SANDS | | C | | | | | | | | | 222 | HOFFMAN, J. H.<br>HOLMES, J. C.<br>YOUNG, J. M. |
| 06/27/60 | 2010 | AA 08.242 | UNITED STATES | EGLIN AFB | | | C | | | | | | | | 195 | SAGALYN, R. C. |
| 06/28/60 | | NIKE-ASP | UNITED STATES | EGLIN AFB | | | C | | | | | | | | N/A | SAGALYN, R. C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/01/60 | 1435 | AA 03.107 | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 162 | UNKNOWN |
| 07/09/60 | 0360 | NASA 10.04 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 105 | NORDBERG, W. P. ALLEN, H. F. |
| 07/13/60 | 1447 | 0811.003 | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 670 | BERNING, W. W. |
| 07/14/60 | 0243 | 0811.004 | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 710 | BERNING, W. W. |
| 07/14/60 | 1005 | AA 06.409 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 07/18/60 | 1001 | AA 06.405 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 07/21/60 | 0130 | AA 06.413 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 07/21/60 | 1002 | AA 06.406 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 07/22/60 | 0453 | NASA 10.18 GE | UNITED STATES | FORT CHURCHILL | | | | C D | | | | | | | 129 | FICHTEL, C. E. DAVIS, L. R. |
| 07/22/60 | 1011 | AA 06.402 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 07/22/60 | 1205 | NASA 5.01 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 224 | SORGNIT, E. F. LANE, J. H. |
| 07/26/60 | 1017 | AA 06.421 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 07/27/60 | 1019 | AA 06.425 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 07/28/60 | 0830 | AA 06.419 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 07/28/60 | 1936 | LT 12 | AUSTRALIA | WOOMERA | | A | | | | | | | | | 126 | UNKNOWN |
| 07/29/60 | 0830 | AA 06.422 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/29/60 | 1014 | AA 06.407 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/01/60 | 0830 | AA 06.408 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/01/60 | 1023 | AA 06.410 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/02/60 | 0314 | STRONGRAM | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 550 | BERNING, W. W. |
| 08/02/60 | 1330 | NN 2.32 | UNITED STATES | WHITE SANDS | | | | | | | | | | | 148 | GARRETT, D. L.<br>DETWILER, C. R.<br>PURCELL, J. D. |
| 08/03/60 | 1526 | NASA 6.03 UI | UNITED STATES | WALLOPS ISLAND | | | C E | | | | | | | | 415 | SPENCER, N. W.<br>BERNING, W. W. |
| 08/06/60 | 0900 | AA 06.411 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/08/60 | 1015 | AA 06.412 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/09/60 | | ATLAS | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | WALKER, R. G. |
| 08/09/60 | 1037 | AA 06.414 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/10/60 | 1035 | AA 06.418 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/13/60 | 1035 | AA 05.423 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/15/60 | 1035 | AA 05.424 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/16/60 | 0142 | AA 08.404 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/16/60 | 1040 | AA 06.426 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/17/60 | 1042 | AA 06.427 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/18/60 | 0242 | AA 06.428 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/18/60 | 1855 | AA 06.430 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/19/60 | 1040 | AA 06.429 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/23/60 | 1701 | NASA 4.16 UE | UNITED STATES | WALLOPS ISLAND | | | | C | | | | | | | 190 | MEREDITH, L. H.<br>HAYMES, R. C. |
| 08/23/60 | 1710 | AA 03.128 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 237 | HINTEREGGER, H. E. |
| 08/25/60 | 0104 | AA C8.244 | UNITED STATES | EGLIN AFB | | C F | | | | | | | | | 200 | SAGALYN, R. C. |
| 08/25/60 | 1428 | AA 05.431 | UNITED STATES | EGLIN AFB | | G V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 08/26/60 | 1100 | SL-C13 | AUSTRALIA | WOOMERA | E | | | | | | | | | | 70 | UNKNOWN |
| 08/27/60 | 1110 | SL-C13 | UNITED KINGDOM | WOOMERA | D | | | | | | | | | | N/A | UNKNOWN |
| 09/03/60 | 1408 | NASA 10.19 GE | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | | 122 | FICHTEL, C. E.<br>DAVIS, L. R. |
| 09/03/60 | 1729 | NASA 10.20 GE | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | | 122 | FICHTEL, C. E.<br>DAVIS, L. R.<br>OGILVIE, K. E. |
| 09/15/60 | 1809 | NASA 1.03 GP | UNITED STATES | FORT CHURCHILL | | J | | | | | | | | C | 76 | BAUMANN, R. C. |
| 09/16/60 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | A | | | | | | | N/A | YAGODA, H.<br>SMART, D. F. |
| 09/17/60 | 0250 | K-60-TW-008<br>S-C15 | JAPAN | AKITA | | Y | | | | | | | | | 46 | MATSUMOTO, H.<br>TAKEYA, Y.<br>OKUMOTO, T.<br>TATEBE, W. |
| 09/19/60 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | | | | | | | D | N/A | WALKER, R. G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/19/60 | 1635 | NASA 11.01 GE | UNITED STATES | VANDENBURG AFB | | | | C | | | | | X | | 1884 | NAUGLE, J.E.<br>FICHTEL, C.E. |
| 09/20/60 | 2245 | 0806.007 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 105 | LEEDER, J. |
| 09/22/60 | 0632 | K-CE-IC-001<br>S-016 | JAPAN | AKITA | | | C | | | | | | | | 187 | HIRAO, K.<br>MIYAZAKI, S.<br>SHIRO, I.<br>AKITA, K.<br>ICHIMIYA, T.<br>TAKAYAMA, K.<br>MURAOKA, T.<br>SUGIYAMA, T. |
| 09/23/60 | | | USSR | KAPUSTIN YAR | | G | D | | | | | | | | N/A | UNKNOWN |
| 09/24/60 | 1813 | NASA 1.05 GP | UNITED STATES | FORT CHURCHILL | | J | | | | | | | | | 76 | BAUMANN, R.C. |
| 09/26/60 | 1125 | K-CE-IC-002<br>S-017 | JAPAN | AKITA | | | C | | | | | | | | 174 | HIRAO, K.<br>MIYAZAKI, S.<br>SHIRO, I.<br>AKITA, K.<br>ICHIMIYA, T.<br>TAKAYAMA, K.<br>MURAOKA, T.<br>SUGIYAMA, T. |
| 09/27/60 | 1444 | NASA 10.21 GE | UNITED STATES | FORT CHURCHILL | | | | B<br>D | | | | | | | 129 | FICHTEL, C.E.<br>DAVIS, L.R.<br>OGILVIE, K.E. |
| 09/27/60 | 2210 | AA C3.102 | UNITED STATES | WHITE SANDS | D | | | | | | | | | | N/A | SILVERMAN, S. |
| 09/29/60 | 0246 | K-CEH-TW-009<br>S-018 | JAPAN | AKITA | | Z | | | | | | | | | 70 | MATSUMOTO, H.<br>TAKEYA, Y.<br>OKUMOTO, T.<br>TATEBE, W. |
| 10/05/60 | 1952 | NASA 4.43 GP | UNITED STATES | FORT CHURCHILL | | J | | | | | | | | | 225 | BAUMANN, R.C.<br>EVANS, H.E. |
| 10/10/60 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | A | | | | | | | N/A | YAGODA, H. |
| 10/12/60 | | | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N.W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/13/60 | 0045 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 62 | UNKNOWN |
| 10/17/60 | 2104 | AA 06.340 | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | 132 | FAUCHER, A. G. |
| 10/18/60 | 1417 | NASA 5.02 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 225 | SORGNIT, E. F.<br>LANE, J. H. |
| 10/22/60 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | | | | | | | D | N/A | WALKER, R. G. |
| 10/25/60 | 2342 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 63 | UNKNOWN |
| 10/27/60 | 2305 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 69 | UNKNOWN |
| 10/31/60 | 2300 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 69 | UNKNOWN |
| 11/03/60 | 2119 | NASA 3.29 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 193 | SORGNIT, E. F.<br>JENKINS, R. B. |
| 11/10/60 | 0144 | NASA 8.04 CA | UNITED STATES | WALLOPS ISLAND | | | D C | | | | | | | | 975 | DUBIN, M.<br>HANSON, W. B.<br>HERTZBERG, M. |
| 11/10/60 | 0235 | ND 3.101 | UNITED STATES | WHITE SANDS | C | | | | | | | | | | 211 | PACKER, D. M. |
| 11/11/60 | 1122 | NASA 10.22 GE | UNITED STATES | FORT CHURCHILL | | | | D | | | | | | | 129 | FICHTEL, C. E.<br>DAVIS, L. R. |
| 11/11/60 | 1211 | NASA 10.23 GE | UNITED STATES | FORT CHURCHILL | | | | D | | | | | | | 129 | FICHTEL, C. E.<br>DAVIS, L. R. |
| 11/12/60 | 1840 | NASA 10.24 GE | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | | 129 | FICHTEL, C. E.<br>DAVIS, L. R. |
| 11/12/60 | 2332 | NASA 10.15 GE | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | | 129 | FICHTEL, C. E.<br>DAVIS, L. R. |
| 11/13/60 | 1603 | NASA 10.16 GE | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | | 129 | FICHTEL, C. E.<br>DAVIS, L. R. |
| 11/15/60 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | | | | | | | D | N/A | WALKER, R. G. |
| 11/15/60 | 1641 | NASA 4.14 GA | UNITED STATES | WALLOPS ISLAND | B G | | D | | | | | | | D | 227 | TAYLOR, H. A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/16/60 | 1951 | NASA 10.13 GE | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | | 129 | FICHTEL,C.E.<br>DAVIS,L.R. |
| 11/16/60 | 1951 | NASA 10.13 | UNITED STATES | FORT CHURCHILL | | | | A | | X | | | | | 128 | FICHTEL,E.C. |
| 11/17/60 | 0600 | NASA 10.14 GE | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | | 129 | FICHTEL,C.E.<br>DAVIS,L.R. |
| 11/17/60 | 0936 | | UNITED STATES | WOOMERA | | V | | | | | | | | | 157 | UNKNOWN |
| 11/17/60 | 1006 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 152 | UNKNOWN |
| 11/17/60 | 1340 | AA 03.144 | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 217 | JURSA,A. |
| 11/18/60 | 0339 | NASA 10.26 | UNITED STATES | FORT CHURCHILL | | | | A | | | | | | | 128 | FICHTEL,E.C. |
| 11/18/60 | 2339 | NASA 10.27 GE | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | | 129 | FICHTEL,C.E.<br>DAVIS,L.R. |
| 11/21/60 | 1050 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 65 | UNKNOWN |
| 11/22/60 | 0842 | NASA 4.11 GG | UNITED STATES | WALLOPS ISLAND | | | | | | C<br>D<br>E | | | | | 183 | MILLIGAN,J.E.<br>STECHER,T.P. |
| 11/22/60 | 1140 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 67 | UNKNOWN |
| 11/23/60 | 1019 | NASA 1.01 GI | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | | 91 | WHIPPLE,E.C. |
| 11/27/60 | 1748 | NASA 1.02 GI | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | | 855 | WHIPPLE,E.C. |
| 11/29/60 | | AEROBEE | UNITED STATES | FORT CHURCHILL | | | | | X | | | | | | N/A | UNKNOWN |
| 11/29/60 | 1116 | NB 3.103 | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 197 | CHUBB,T.A.<br>FRIEDMAN,H.<br>PACKER,D.M. |
| 11/30/60 | 0501 | AA 03.284 | UNITED STATES | FORT CHURCHILL | | | B | | | | | | | | 241 | HUTCHINSON,R. |
| 12/06/60 | 1844 | PHOENIX I | UNITED STATES | VANDENBURG AFB | | | X | | | | | | | | 367 | UNKNOWN |
| 12/08/60 | 1652 | NASA 10.25 CI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | B | 152 | BOURDEAU,R.E.<br>SMITH,L.G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/09/60 | 1120 | NASA 10.12 CA | UNITED STATES | WALLOPS ISLAND | | A G | | | | | | | | | 146 | DUBIN,M.<br>BEDINGER,J.F. |
| 12/10/60 | 2230 | NASA 8.05 CA | UNITED STATES | WALLOPS ISLAND | | A G | | | | | | | | | 716 | DUBIN,M.<br>BEDINGER,J.F. |
| 12/12/60 | 2236 | NASA 8.08 GE | UNITED STATES | WALLOPS ISLAND | | | A B | | | | | | | A | 1140 | HEPPNER,J.P. |
| 12/19/60 | 1652 | NASA 10.06 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | A | 110 | NORDBERG,W.P.<br>SMITH,W.S.<br>ALLEN,H.F. |
| 01/17/61 | 2125 | NASA 3.36 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 209 | SORGNIT,E.F. |
| 01/19/61 | 1242 | NASA 5.03 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 138 | SORGNIT,E.F.<br>LANE,J.H. |
| 01/23/61 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | | | | | | | D | N/A | HUNTER,R. |
| 02/01/61 | 1219 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 62 | UNKNOWN |
| 02/14/61 | 2350 | NASA 10.07 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 130 | NISBET,J.S.<br>QUINN,T.<br>HALE,L. |
| 02/17/61 | 0226 | NASA 10.08 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 85 | NORDBERG,W.P. |
| 02/23/61 | | NIKE-CAJUN | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | N/A | FAUCHER,A.G. |
| 02/24/61 | 2419 | AA 06.170 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 133 | FAUCHER,A.G. |
| 03/08/61 | 1753 | AE 16.305 | UNITED STATES | EGLIN AFB | | | C E | | | | | | | | 431 | GUSTAFSON,P.<br>SWENSON,P.<br>ULWICK,J. |
| 03/14/61 | 2152 | AA 06.801 | UNITED STATES | EGLIN AFB | | | A | | | | | | | | 118 | ELLIS,C.E. |
| 03/15/61 | 1747 | NASA 10.49 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 130 | SORGNIT,E.F. |
| 03/17/61 | 1445 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 69 | UNKNOWN |
| 03/26/61 | 1654 | NASA 6.04 UI | UNITED STATES | WALLOPS ISLAND | | | C E | | | | | | | D | 386 | BRACE,C.H. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 2 3 4 5 6 7 8 9 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|
| 03/27/61 | 0408 | K -C8 -ID4/AG1<br>S -C19A | JAPAN | AKITA | C | 172 | HIRAO,K.<br>MIYAZAKI,S.<br>SHIRO,I.<br>AKITA,K.<br>ICHIMIYA,T.<br>DOTE,T.<br>MURAOKA,T. |
| 03/31/61 | 1443 | | UNITED STATES | WHITE SANDS | | 60 | UNKNOWN |
| 04/05/61 | 1257 | NASA 10.33 GA | UNITED STATES | WALLOPS ISLAND | Z | 116 | SMITH,W.<br>DUBIN,M. |
| 04/10/61 | 2210 | | UNITED STATES | WHITE SANDS | | 68 | UNKNOWN |
| 04/14/61 | 1715 | NASA 4.19 GT | UNITED STATES | WALLOPS ISLAND | G D | 206 | DUNKELMAN,L.<br>WHITE,W.A. |
| 04/18/61 | 1227 | K -C8 -ID5/AG2<br>S -C20 | JAPAN | AKITA | C<br>B | 144 | HIRAO,K.<br>MIYAZAKI,S.<br>SHIRO,I.<br>AKITA,K. |
| 04/19/61 | 0936 | NASA 3.05 CA | UNITED STATES | WALLOPS ISLAND | V | 164 | MANRING,E.R.<br>BEDINGER,J.F. |
| 04/19/61 | 1837 | ISRC-RS-002 | ITALY | SARDINIA | V | 200 | BROGLIO,L. |
| 04/19/61 | 2345 | | UNITED STATES | WHITE SANDS | | 72 | UNKNOWN |
| 04/20/61 | 0346 | ISRC-RS-003 | ITALY | SARDINIA | V | 190 | BROGLIO,L. |
| 04/20/61 | 1430 | | UNITED STATES | WHITE SANDS | | 66 | UNKNOWN |
| 04/20/61 | 1843 | ISRC-RS-005 | ITALY | SARDINIA | V | 188 | BROGLIO,L. |
| 04/20/61 | 2312 | NASA 3.06 | UNITED STATES | WALLOPS ISLAND | V | 180 | MANRING,E.R.<br>BEDINGER,J.F. |
| 04/21/61 | 0012 | NASA 3.06 CA | UNITED STATES | WALLOPS ISLAND | V | 180 | MANRING,E.R.<br>BEDINGER,J.F.<br>DUBIN,M. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/21/61 | 0939 | NASA 3.08 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 165 | MANRING, E. R.<br>BEDINGER, J. F.<br>DUBIN, M. |
| 04/21/61 | 1200 | NASA 4.39 NP | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | C | 154 | GOLD, H. |
| 04/24/61 | 0253 | HAD 201 | AUSTRALIA | WOOMERA | | F | | | | | | | | | 58 | UNKNOWN |
| 04/27/61 | 2002 | NASA 8.10 GI | UNITED STATES | WALLOPS ISLAND | | I | A<br>C | | | | | | | | 724 | JACKSON, J. E. |
| 05/02/61 | 2115 | NASA 12.01 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 14 | SPENCER, N. W. |
| 05/04/61 | 2147 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 55 | UNKNOWN |
| 05/05/61 | 2300 | NASA 10.02 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 113 | SMITH, W. |
| 05/06/61 | 0454 | NASA 10.28 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 116 | SMITH, W. |
| 05/09/61 | 1153 | NASA 10.29 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 117 | SMITH, W. |
| 05/10/61 | 0023 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 70 | UNKNOWN |
| 05/10/61 | 0031 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 66 | UNKNOWN |
| 05/10/61 | 0615 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 64 | UNKNOWN |
| 05/10/61 | 0715 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 66 | UNKNOWN |
| 05/10/61 | 1015 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 71 | UNKNOWN |
| 05/10/61 | 1110 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 70 | UNKNOWN |
| 05/10/61 | 1550 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 64 | UNKNOWN |
| 05/10/61 | 1650 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 65 | UNKNOWN |
| 05/10/61 | 1835 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 70 | UNKNOWN |
| 05/10/61 | 1946 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 68 | UNKNOWN |
| 05/10/61 | 2000 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 70 | UNKNOWN |
| 05/10/61 | 2110 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 70 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/10/61 | 2330 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 69 | UNKNOWN |
| 05/17/61 | 1922 | NASA 1.04 GP | UNITED STATES | FORT CHURCHILL | | J | | | | | | | | | 76 | EVANS,H.E. |
| 05/18/61 | 2010 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 70 | UNKNOWN |
| 05/18/61 | 2100 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 70 | UNKNOWN |
| 05/18/61 | 2130 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 71 | UNKNOWN |
| 05/18/61 | 2319 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 68 | UNKNOWN |
| 05/19/61 | 1246 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 69 | UNKNOWN |
| 05/19/61 | 1803 | NASA 1.06 GP | UNITED STATES | FORT CHURCHILL | | J | | | | | | | | | 23 | EVANS,H.E. |
| 05/25/61 | 1703 | NASA 14.01 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 116 | SORGNIT,E.F. |
| 06/06/61 | 1231 | AA 03.108 | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 165 | SOBERMAN,R.K. |
| 06/06/61 | 1248 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 93 | UNKNOWN |
| 06/06/61 | 2148 | NASA 10.50 UA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 150 | SCHULTE,H.J. |
| 06/06/61 | 2148 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 93 | UNKNOWN |
| 06/05/61 | 2148 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 110 | UNKNOWN |
| 06/09/61 | 1802 | NASA 10.56 UA | UNITED STATES | WALLOPS ISLAND | | F G | C D | | | | | | | | 142 | SCHAEFER,E.J. |
| 06/13/61 | 0512 | NASA 8.09 GI | UNITED STATES | WALLOPS ISLAND | | I | A C | | | | | | | | 867 | JACKSON,J.E. |
| 06/15/61 | 0003 | NASA 8.13 IT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 901 | MOLOZZI,A.R. |
| 06/16/61 | 2018 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 66 | UNKNOWN |
| 06/16/61 | 2153 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 68 | UNKNOWN |
| 06/17/61 | 0729 | ND 3.112 | UNITED STATES | WHITE SANDS | C | | | | | | | | | | 197 | PACKER,D.M. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/18/61 | 0435 | S-CC4 | JAPAN | CHACHI | | | | A | | | | | | | 105 | TAKEUCHI, H.<br>IMAI, T.<br>YOSHIZAWA, T.<br>OTSUKA, K.<br>OYA, K. |
| 06/21/61 | 1415 | NE 3.102 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 271 | PURCELL, J. D.<br>AUSTIN, W. E.<br>DETWILER, C. R. |
| 06/23/61 | 1500 | AA CC6.104 | UNITED STATES | EGLIN AFB | | | | | | | | A | | | 157 | SOBERMAN, R. K. |
| 06/24/61 | 2317 | NASA 8.15 AI | UNITED STATES | WALLOPS ISLAND | | I | C | | | | | | | C | 1018 | KNECHT, R. W. |
| 06/26/61 | 1515 | NASA 4.20 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | G | | | | 187 | DUNKELMAN, L.<br>WHITE, W. A. |
| 07/13/61 | 2207 | NASA 10.30 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 119 | SMITH, W. |
| 07/14/61 | 0257 | NASA 14.03 UA | UNITED STATES | WALLOPS ISLAND | | | B | | | | | | | A | 196 | CAHILL, L. J. |
| 07/14/61 | 1500 | NASA 14.04 UA | UNITED STATES | WALLOPS ISLAND | | | B | | | | | | | A | 200 | CAHILL, L. J. |
| 07/14/61 | 1602 | NASA 10.31 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 101 | SMITH, W. |
| 07/20/61 | 1030 | NASA 10.32 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 124 | SMITH, W. |
| 07/20/61 | 1312 | NASA 14.05 UA | UNITED STATES | WALLOPS ISLAND | | | B | | | | | | | A | 193 | CAHILL, L. J. |
| 07/21/61 | 0242 | K-06-ID6/Tw10 | JAPAN | AKITA | | Z | | | | | | | | | 75 | OYA, H.<br>TAKEYA, Y.<br>OKUMOTO, T.<br>TATEBE, W. |
| 08/12/61 | 1057 | NASA 4.42 NP | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | C | 153 | PLOHR, H. W. |
| 08/18/61 | 0306 | NASA 10.51 CI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | | 141 | SMITH, L. G. |
| 08/23/61 | 1704 | | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 225 | HINTEREGGER, H. E. |
| 08/29/61 | 1435 | NE 3.110 | UNITED STATES | WHITE SANDS | | | | | | D<br>C | | | | | 260 | GARRETT, D. L.<br>PURCELL, J. D. |
| 09/07/61 | 1817 | ISRC-RS-006 | ITALY | SARDINIA | | V | | | | | | | | | 200 | BROGLIO, L. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/08/61 | 0411 | ISRC-R S-008 | ITALY | SARDINIA | | V | | | | | | | | | 145 | BROGLIO, L. |
| 09/13/61 | 0932 | NASA 8.06 CA | UNITED STATES | WALLOPS ISLAND | | A<br>C | | | | | | | | | 331 | MANRING, E. R.<br>SMITH, W. S. |
| 09/13/61 | 2353 | NASA 8.22 CA | UNITED STATES | WALLOPS ISLAND | | A<br>C | | | | | | | | | 431 | MANRING, E. R.<br>SMITH, W. S. |
| 09/16/61 | 2139 | NASA 3.18 CA | UNITED STATES | WALLOPS ISLAND | | A | | | | | | | | | 208 | MANRING, E. R.<br>BEDINGER, J. F.<br>DUBIN, M. |
| 09/16/61 | 2355 | NASA 10.36 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 88 | SMITH, W. S. |
| 09/17/61 | 1003 | NASA 3.19 CA | UNITED STATES | WALLOPS ISLAND | | A | | | | | | | | | 173 | MANRING, E. R.<br>BEDINGER, J. F.<br>DUBIN, M. |
| 09/17/61 | 1013 | NASA 10.37 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 92 | SMITH, W. |
| 09/18/61 | 1215 | NASA 9.01 GG | UNITED STATES | WOOMERA | | | | | | | D | | | | 193 | BOGGESS, A. |
| 09/23/61 | 1827 | NASA 1.08 GA | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 78 | JEPSON, R. |
| 09/26/61 | 2156 | 08C6.016 | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | | 128 | LEEDER, J.<br>CRUICKSHANK, W. J. |
| 09/27/61 | 1230 | AA 02.502 | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 59 | ASHENFELTER, T. |
| 09/30/61 | 1430 | NASA 4.25 GS | UNITED STATES | WALLOPS ISLAND | | | | | | F | | | | C | 223 | BEHRING, W. E.<br>HALLAM, K. L.<br>FOLLETT, W. H.<br>DUNKELMAN |
| 09/30/61 | 2042 | NASA 1.09 GA | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 73 | LLOYD, W.<br>DERDEYN, S.<br>MARTIN, F. |
| 10/04/61 | 1119 | NASA 9.02 GG | UNITED STATES | WOOMERA | | | | | | | D | | | | 195 | BOGGESS, A. |
| 10/10/61 | 1740 | NASA 8.23 GA | UNITED STATES | WALLOPS ISLAND | | | C<br>D<br>E | | | | | | | | 1544 | SPENCER, N. W.<br>TAYLOR, H. A. |
| 10/12/61 | 1321 | AA 03.146 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 192 | JURSA, A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE(KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/14/61 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | F | | | | N/A | SALISBURY, J.W. |
| 10/14/61 | 0426 | NASA 8.17 AI | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | C | 1055 | KNECHT, P.W. |
| 10/15/61 | 1433 | NASA 1.10 GA | UNITED STATES | FORT CHURCHILL | | G | | X | | | | | | | 76 | DERDEYN, S.<br>WHEELER, W. |
| 10/17/61 | 2011 | NASA 1.07 GA | UNITED STATES | FORT CHURCHILL | | | | | | | | | | A | 65 | DERDEYN, S.<br>WHEELER, W. |
| 10/18/61 | 1325 | NASA 4.40 NP | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | C | 152 | REGETZ, J.D. JR. |
| 10/19/61 | 1738 | P-21 | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 6800 | JACKSON, J.E.<br>BAUER, S.J. |
| 10/24/61 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | F | | | | N/A | SALISBURY, J.W. |
| 10/24/61 | 0359 | K -08 -ID-07<br>S -023 | JAPAN | AKITA | | | C<br>E | | | | | | | | 198 | HIRAO, K.<br>MIYAZAKI, S.<br>SHIRO, I.<br>FUGONO, N.<br>SUGIYAMA, T.<br>MURAOKA, T. |
| 10/25/61 | 0659 | AB 03.351 | UNITED STATES | WHITE SANDS | | D | | | | | | | | | 232 | SALISBURY, J.W. |
| 10/27/61 | 0935 | NASA 10.52 CI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | | 148 | SMITH, L.G. |
| 11/01/61 | 0300 | ND 3.122 | UNITED STATES | WHITE SANDS | D | | | | | | | | | | 212 | PACKER, D.M. |
| 11/01/61 | 1756 | NASA 9.03 GG | UNITED STATES | WOOMERA | | | | | | | D | | | | 193 | BOGGESS, A. |
| 11/02/61 | 1724 | NASA 1.11 GA | UNITED STATES | FORT CHURCHILL | | G | | X | | | | | | | 68 | MARTIN, F.<br>DERDYN, S. |
| 11/05/61 | 2011 | NASA 1.12 GA | UNITED STATES | FORT CHURCHILL | | G | | X | | | | | | | 71 | MARTIN, F.<br>DERDYN, S. |
| 11/15/61 | | | USSR | | | G | D | | | | | | | | 430 | UNKNOWN |
| 11/17/61 | 1606 | JAVELIN | UNITED STATES | WALLOPS ISLAND | | E | | | | | | | | | 610 | UNKNOWN |
| 11/18/61 | 0630 | NASA 10.72 NA | UNITED STATES | WALLOPS ISLAND | | A | | | | | | | | | 142 | LANFORD, W.E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/18/61 | 1342 | NASA 11.05 GB | UNITED STATES | VANDENBURG AFB | | | | C | | | | A | X | | 1057 | YOUNG,R.S.<br>KNIFFEN,D.<br>BERG,O.E. |
| 11/20/61 | 1804 | NASA 9.04 GG | UNITED STATES | WOOMERA | | | | | | | D | | | | 209 | BOGGESS,A. |
| 11/22/61 | 2104 | POD-3 | | | | | | | | | | | | | N/A | UNKNOWN |
| 12/07/61 | 2315 | AB 03.344 | UNITED STATES | EGLIN AFB | | | C | | | | | | | | 234 | FAUCHER,A.G. |
| 12/08/61 | | ASTROBEE 1500 | UNITED STATES | VANDENBURG AFB | | | | | | | | | | A | N/A | SWENSON,P.<br>GUSTAFSON,P. |
| 12/09/61 | | | ALGERIA | HAMMAGUIR | | V | | | | | | | | | N/A | BLAMONT,J.E. |
| 12/09/61 | | | ALGERIA | REGGANE | | V | | | | | | | | | N/A | BLAMONT,J.E. |
| 12/10/61 | 1701 | NASA 10.76 GE | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 132 | OGILVIE,K.<br>FICHTEL,C. |
| 12/14/61 | 1029 | HAD 103 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 130 | UNKNOWN |
| 12/19/61 | | ATLAS POD | UNITED STATES | CAPE KENNEDY | | | | A | | | | | | D | N/A | YAGODA,H.<br>MARCOTTE,L. |
| 12/19/61 | | ATLAS POD | UNITED STATES | CAPE KENNEDY | | | | A | | | | A | | | N/A | KATZ,L.<br>SOBERMAN,R.<br>MARCOTTE,L.<br>SAGALYN,R. |
| 12/21/61 | 1954 | NASA 10.64 GA | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 132 | SPENCER,N.W.<br>BRACE,C.H. |
| 12/21/61 | 2131 | NASA 10.74 GI | UNITED STATES | WALLOPS ISLAND | | | C<br>B | | | | | | | | 99 | KANE,J.A. |
| 12/22/61 | 0424 | NASA 6.05 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | D | 365 | BRACE,C.H. |
| 01/00/62 | | ATLAS POD | UNITED STATES | CAPE KENNEDY | | | | X | | | | | | | N/A | SAGALYN,R.<br>AGALYN,R.C. |
| 01/13/62 | 1615 | NASA 4.68 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | G<br>D | | | | 209 | RUSSELL,W.A. JR. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/16/62 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | E | | | | | N/A | HINTEREGGER, H.E. |
| 01/29/62 | 2000 | AA 15.109 | UNITED STATES | EGLIN AFB | | | | | | | | | | A | 250 | HOULT, C.P.<br>SILVERMAN, S. |
| 02/05/62 | 2059 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 44 | UNKNOWN |
| 02/17/62 | 1943 | NASA 4.41 NP | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | C | 157 | DILLON, R.C. |
| 02/20/62 | 1328 | NASA 10.90 UA | UNITED STATES | WALLOPS ISLAND | | F<br>G | C<br>D | | | | | | | | 132 | SCHAEFER, E.J.<br>DUBIN, M. |
| 03/01/62 | 1807 | AA 06.167 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 144 | FAIRE, A.C. |
| 03/01/62 | 1870 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 44 | UNKNOWN |
| 03/01/62 | 1878 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | N/A | UNKNOWN |
| 03/01/62 | 2323 | NASA 10.100 CA | UNITED STATES | WALLOPS ISLAND | | A | | | | | | | | | 135 | MANRING, E.R.<br>SMITH, W.S. |
| 03/02/62 | 0005 | NASA 10.38 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | D | 113 | SMITH, W.S.<br>NORDBERG, W.P. |
| 03/02/62 | 1047 | NASA 10.70 GT | UNITED STATES | WALLOPS ISLAND | | A | | | | | | | | A | 145 | DONN, B.D. |
| 03/02/62 | 1054 | NASA 10.101 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 134 | MANRING, E.R.<br>SMITH, W.S. |
| 03/02/62 | 1115 | NASA 10.39 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | D | 115 | SMITH, W.S.<br>NORDBERG, W.P. |
| 03/06/62 | 1330 | AB 03.150 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 323 | JURSA, A. |
| 03/23/62 | 2125 | ARCAS | UNITED STATES | WALLOPS ISLAND | | J | | | | | | | | | N/A | NORDBERG, W.P.<br>SMITH, L.G. |
| 03/23/62 | 2255 | ARCAS | UNITED STATES | WALLOPS ISLAND | | J | | | | | | | | | N/A | NORDBERG, W.P.<br>SMITH, L.G. |
| 03/23/62 | 2344 | NASA 10.102 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | D | 142 | MANRING, E.R.<br>NORDBERG, W.<br>SMITH, W.S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/23/62 | 2354 | NASA 10.40 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | D | 121 | SMITH, W. S.<br>NORDBERG, W. P. |
| 03/27/62 | 2348 | NASA 10.103 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | D | 117 | MANRING, E. R.<br>NORDBERG, W.<br>SMITH, W. S. |
| 03/28/62 | 0003 | NASA 10.41 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | D | 123 | SMITH, W. S.<br>NORDBERG, W. P. |
| 03/29/62 | 0727 | P-21A | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 627 | JACKSON, J. E.<br>BAUER, S. J. |
| 03/29/62 | 0928 | HAD 105 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 125 | UNKNOWN |
| 03/29/62 | 0928 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 98 | UNKNOWN |
| 04/05/62 | 0431 | NASA 10.79 NA | UNITED STATES | WALLOPS ISLAND | D, V | | | | | | | | | | 70 | POTTER, A. E. |
| 04/17/62 | 0928 | NASA 10.42 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | D | 119 | SMITH, W. S. |
| 04/17/62 | 0943 | NASA 3.20 CA | UNITED STATES | WALLOPS ISLAND | | A | | | | | | | | | 201 | MANRING, E. R.<br>BEDINGER, J. F.<br>SMITH, W. S. |
| 04/18/62 | 1932 | AA 15.285 | UNITED STATES | EGLIN AFB | | | B | | | | | | | | 221 | HUTCHINSON, R. |
| 04/19/62 | 1600 | NASA 10.110 GI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | D | 121 | SERBU, G. P.<br>HIRAO, K. |
| 04/25/62 | 1403 | SA-II | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | 145 | JOHNSON, W. G.<br>LUNDQUIST, C. |
| 04/30/62 | 1835 | AA 15.196 | UNITED STATES | EGLIN AFB | | | A | | | | | | | | 255 | ULWICK, J. C. |
| 05/01/62 | 1918 | AA 01.193 | UNITED STATES | EGLIN AFB | | | | | A | | | | | | 94 | ULWICK, J. C. |
| 05/03/62 | 1803 | NASA 5.04 GA | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | A | 113 | TAYLOR, H. A.<br>LANE, J. H. |
| 05/03/62 | 2000 | NASA 8.21 GI | UNITED STATES | WALLOPS ISLAND | | | A | | | | A | | — | | 845 | SERBU, G. P. |
| 05/06/62 | | TRAILBLAZER-2 | UNITED STATES | WALLOPS ISLAND | | | | | | | | A | | | N/A | SOBERMAN, R. K. |
| 05/08/62 | 1505 | NASA 4.46 NP | UNITED STATES | WHITE SANDS | | | | | | | | E | | | 196 | BROWN, W. E. JR. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/16/62 | 1703 | NASA 10.112 GI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | D | 121 | SERBU,G.P.<br>HIRAO,K. |
| 05/17/62 | 0204 | NASA 10.111 GI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | D | 127 | SERBU,G.P.<br>HIRAO,K. |
| 05/18/62 | 1801 | NASA 10.91 UA | UNITED STATES | WALLOPS ISLAND | | F<br>G | C<br>D | | | | | | | | 135 | SCHAEFER,E.J.<br>DUBIN,M. |
| 05/25/62 | 1243 | NASA 4.48 GT | UNITED STATES | WALLOPS ISLAND | | | C<br>E | A | | | | | | | 200 | PRESSLY,E.C. |
| 05/29/62 | | | ALGERIA | REGGANE | | V | | | | | | | | | N/A | BLAMONT,J.E. |
| 05/29/62 | | | FRANCE | ILE DU LEVANT | | V | | | | | | | | | N/A | BLAMONT,J.E. |
| 06/05/62 | | | ALGERIA | HAMMAGUIR | | V | | | | | | | | | N/A | BLAMONT,J.E. |
| 06/05/62 | | | ALGERIA | HAMMAGUIR | | V | | | | | | | | | N/A | BLAMONT,J.E. |
| 06/05/62 | | | ALGERIA | REGGANE | | V | | | | | | | | | N/A | BLAMONT,J.E. |
| 06/05/62 | | | ALGERIA | REGGANE | | V | | | | | | | | | N/A | BLAMONT,J.E. |
| 06/05/62 | 1245 | AB 03.133 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 216 | HINTEREGGER,H.E. |
| 06/06/62 | | | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | N/A | BEDINGER,J.F. |
| 06/06/62 | 2340 | NASA 14.19 UA | UNITED STATES | WALLOPS ISLAND | | A<br>B<br>C<br>F | | | | | | | | | 125 | HORVATH,J.J.<br>BRACE,L.H.<br>SPENCER,N.W.<br>ORVATH,J.J.<br>BRACE,L.H.<br>SPENCER,L.W. |
| 06/07/62 | 0005 | NASA 10.43 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | D | 120 | SMITH,W.S. |
| 06/07/62 | 0056 | NASA 3.21 CA | UNITED STATES | WALLOPS ISLAND | | A | | | | | | | | | 162 | MANRING,E.R.<br>BEDINGER,J.F.<br>SMITH,W.S. |
| 06/07/62 | 0241 | ARCAS | UNITED STATES | WALLOPS ISLAND | | Z<br>V | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE(KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/07/62 | 0329 | ARCAS | UNITED STATES | WALLOPS ISLAND | | J | | | | | | | | | N/A | NORDBERG,W.P.<br>SMITH,L.G. |
| 06/08/62 | 0053 | NASA 10.44 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 117 | SMITH,W.S. |
| 06/11/62 | 1450 | NASA REHBAR II | UNITED STATES | SONMIANI | | V | | | | | | | | | 116 | MUSTAFA,T.<br>DUBIN,M.<br>BURKE,W. |
| 06/12/62 | 2130 | AB 03.134 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 299 | HINTEREGGER,H.E. |
| 06/15/62 | 1648 | NASA 14.12 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | E | | | | | 143 | KANE,J.A.<br>AIKEN,A.C.,JR.<br>WHIPPLE,E.C. |
| 06/18/62 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | X | | | N/A | SALISBURY,J.W. |
| 06/19/62 | 0659 | AB 03.352 | UNITED STATES | WHITE SANDS | | O | | | | | | | | | 224 | SALISBURY,J.W. |
| 06/20/62 | 0520 | SL-C45 | UNITED KINGDOM | WOOMERA | | Y | | | | F | | | | | 227 | UNKNOWN |
| 06/20/62 | 1329 | NASA 4.26 NP | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | D | 158 | FLAGE,R.A. |
| 06/26/62 | 0838 | HAD 108 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 116 | UNKNOWN |
| 06/27/62 | 1410 | NIKE-ASP III | UNITED STATES | | | | C | | | | | | | | N/A | UNKNOWN |
| 06/29/62 | 0455 | NASA 4.71 UA | UNITED STATES | WALLOPS ISLAND | A | | | | | | | | | | 208 | FASTIE,W.G. |
| 06/29/62 | 0500 | NASA 4.71 UP | UNITED STATES | WALLOPS ISLAND | O | | | | | | | | | | 209 | FASTIE,W.G. |
| 06/29/62 | 2100 | NASA 4.72 UP | UNITED STATES | WALLOPS ISLAND | O | | | | | | | | | | 210 | FASTIE,W.G. |
| 07/01/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | Y | | | | | | | | | N/A | FAIRE,A.C. |
| 07/05/62 | 0346 | SL-164 | UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | 111 | UNKNOWN |
| 07/08/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | Y | | | | | | | | | N/A | FAIRE,A.C. |
| 07/09/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | | D | | | | | | | | N/A | CHAMPION,K. |
| 07/09/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | | D | | | | | | | | N/A | CHAMPION,K. |
| 07/09/62 | | HONEST JOHN-NI | UNITED STATES | JOHNSTON ISLAND | | | C<br>D | | | | | | | | N/A | ULWICK,J.C.<br>GALYN,R.G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/19/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | Y | | | | | | | | | N/A | FAIRE,A.C. |
| 07/23/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | Y | | | | | | | | | N/A | FAIRE,A.C. |
| 07/24/62 | 2141 | NASA 4.23 US | UNITED STATES | WALLOPS ISLAND | | | | | | D | | | | C | 208 | SHELDON,C.E. |
| 07/25/62 | 1541 | NC 17.117 | UNITED STATES | VANDENBURG AFB | | | D | | | | | | | | 1166 | HOFFMAN,J.H.<br>HOLMES,J.C.<br>JOHNSON,C.Y. |
| 07/26/62 | 0303 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 66 | UNKNOWN |
| 07/26/62 | 0509 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 61 | UNKNOWN |
| 07/26/62 | 0609 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 59 | UNKNOWN |
| 07/27/62 | 0911 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 66 | UNKNOWN |
| 07/27/62 | 0939 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 66 | UNKNOWN |
| 07/27/62 | 1037 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 68 | UNKNOWN |
| 07/27/62 | 1145 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 66 | UNKNOWN |
| 07/30/62 | 1143 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 67 | UNKNOWN |
| 07/30/62 | 1341 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 67 | UNKNOWN |
| 08/03/62 | 1746 | AA 13.194 | UNITED STATES | EGLIN AFB | | | C<br>B | | | | | | | | 502 | VANCOUR,R. |
| 08/06/62 | 1744 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 60 | UNKNOWN |
| 08/06/62 | 1821 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 62 | UNKNOWN |
| 08/06/62 | 2056 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 68 | UNKNOWN |
| 08/07/62 | 0047 | K-62-001 | SWEDEN | KRONOGARD | | K | | A<br>B<br>C<br>D | | | | | | | 105 | ORTNER,J.<br>WITT,G.<br>REY,L. |
| 08/07/62 | 2202 | K62-2 | PAKISTAN | KRONOGARD | | K | | | | | | | | | 70 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/08/62 | 1655 | NASA 4.60 GT | UNITED STATES | WALLOPS ISLAND | | D<br>E | | | | D | | | | | 149 | RUSSELL, W. A., JR.<br>BOGGESS, A., III<br>DUNKELMAN, L. |
| 08/11/62 | 0140 | K-62 | SWEDEN<br>UNITED STATES | KRONOGARD | | A | | B | | | | | | | 105 | ORTNER, J.<br>WITT, G.<br>REY, L. |
| 08/15/62 | 2120 | SL-109 | UNITED KINGDOM | WOOMERA | | | C | | | | | | | | 111 | UNKNOWN |
| 08/19/62 | 0059 | K-62-004 | SWEDEN<br>UNITED STATES | KRONOGARD | | G<br>K | | A<br>B<br>C | | | | | | | 109 | ORTNER, J.<br>WITT, G.<br>REY, L. |
| 08/22/62 | 1530 | NE 3.128 | UNITED STATES | WHITE SANDS | | | | | | E<br>F | | | | | 234 | AUSTIN, W. E.<br>PURCELL, J. D.<br>GARRETT, D. L. |
| 08/27/62 | 0908 | HAD 107 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 114 | UNKNOWN |
| 08/28/62 | 1934 | AC C6.829 | UNITED STATES | EGLIN AFB | | | A | | | | | | | | 148 | HARRISON, R. |
| 08/31/62 | 0058 | K-62-005 | SWEDEN<br>UNITED STATES | KRONOGARD | | K | | A<br>B<br>C<br>D | | | | | | | 111 | ORTNER, J.<br>WITT, G.<br>REY, L. |
| 09/06/62 | 1430 | NASA 1.13 NA | UNITED STATES | WHITE SANDS | C | | | | | | | | | | 74 | BARTH, C. A. |
| 09/11/62 | 1330 | SL-C44 | UNITED KINGDOM | WOOMERA | | | C<br>E | | | | | | | | 232 | UNKNOWN |
| 09/20/62 | 0421 | SL-108 | UNITED KINGDOM | WOOMERA | | | C | | | | | | | | 113 | UNKNOWN |
| 09/22/62 | 0645 | NASA 11.02 UR | UNITED STATES | WALLOPS ISLAND | | | C | | | | A | | | | 1691 | HADDOCK, F. T.<br>SCHULTE, H. F. |
| 09/24/62 | 1711 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 69 | UNKNOWN |
| 09/24/62 | 1750 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 64 | UNKNOWN |
| 09/27/62 | | AEROBEE | UNITED STATES | EGLIN AFB | | G | | | | | | | | | N/A | SAGALYN, R. C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/27/62 | 1800 | AB 03.246 | UNITED STATES | WHITE SANDS | | | C E B | | | | | | | | 260 | SAGALYN, R.C. |
| 09/30/62 | 0602 | NASA 4.69 CG | UNITED STATES | WALLOPS ISLAND | | | | | | | F | | | | 171 | FISHER, P.C. |
| 10/07/62 | | NIKE-CAJUN | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N.W. |
| 10/09/62 | | AGENA | UNITED STATES | VANDENBURG AFB | | | | A | | | | | | | N/A | YAGODA, H. |
| 10/10/62 | | NIKE-CAJUN | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N.W. |
| 10/11/62 | | 111671CAJUN | UNITED STATES | BARKING SANDS | | V | | | | | | | | | N/A | SMITH, L.B. |
| 10/11/62 | 2033 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 67 | UNKNOWN |
| 10/12/62 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | F | | | | N/A | SALISBURY, J.W. |
| 10/12/62 | 2101 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 67 | UNKNOWN |
| 10/12/62 | 2132 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 61 | UNKNOWN |
| 10/12/62 | 2238 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 65 | UNKNOWN |
| 10/12/62 | 2309 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 61 | UNKNOWN |
| 10/13/62 | 0013 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 60 | UNKNOWN |
| 10/13/62 | 0131 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 68 | UNKNOWN |
| 10/13/62 | 0136 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 65 | UNKNOWN |
| 10/13/62 | 0214 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 65 | UNKNOWN |
| 10/13/62 | 0244 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 63 | UNKNOWN |
| 10/13/62 | 0335 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 64 | UNKNOWN |
| 10/13/62 | 0352 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 62 | UNKNOWN |
| 10/13/62 | 0659 | AC 03.353 | UNITED STATES | WHITE SANDS | | D | | | | | | | | | 317 | SALISBURY, J.W. |
| 10/15/62 | 1115 | AC 06.441 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N.W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/15/62 | 1617 | SL-C62 | UNITED KINGDOM | WOOMERA | | | C E | | | | | | | | 154 | UNKNOWN |
| 10/16/62 | 1115 | AC 06.434 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/16/62 | 1506 | NASA 14.31 GI | UNITED STATES | WALLOPS ISLAND | | | B C E | | | | | | | B | 166 | BAUER, S. J. SMITH, L. G. |
| 10/17/62 | 0040 | AC 06.443 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/17/62 | 0040 | NA-CAGMAR | UNITED STATES | EGLIN AFB | | A | | | | | | | | | N/A | JUSTUS, C. G. EDWARDS, H. D. |
| 10/17/62 | 1116 | AC 06.442 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/17/62 | 1552 | AA C6.832 | UNITED STATES | WALLOPS ISLAND | | | A | | | | | | | | 141 | ETKIND, I. |
| 10/19/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | E | V | C | | | | | | | | N/A | FAIRE, A. C. |
| 10/19/62 | 1117 | AC 06.438 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/21/62 | | | UNITED STATES | BARKING SANDS | | V | | | | | | | | | N/A | SMITH, L. B. |
| 10/22/62 | 1119 | AC 06.447 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/23/62 | 1119 | AC 06.448 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/23/62 | 1930 | AC 20.463 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/24/62 | | EXOS | UNITED STATES | EGLIN AFB | | | C | | | | | | | | N/A | ULWICK, J. C. |
| 10/24/62 | 0946 | HAD 111 | AUSTRALIA | WOOMERA | | | | | | | | | | | 133 | UNKNOWN |
| 10/25/62 | | HONEST JOHN-NI | UNITED STATES | JOHNSTON ISLAND | | | C D | | | | | | | | N/A | ULWICK, J. C. GALYN, R. G. |
| 10/25/62 | | HONEST JOHN-NI | UNITED STATES | JOHNSTON ISLAND | | | C D | | | | | | | | N/A | ULWICK, J. C. GALYN, R. G. |
| 10/25/62 | | HONEST JOHN-NI | UNITED STATES | JOHNSTON ISLAND | | | C D | | | | | | | | N/A | ULWICK, J. C. GALYN, R. G. |
| 10/25/62 | 0600 | AA 13.195 | UNITED STATES | EGLIN AFB | | | | | | | | | | | 669 | ULWICK, J. C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/25/62 | 0630 | AC 06.444 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/25/62 | 1115 | AC 06.437 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/25/62 | 1121 | NA-PAULA | UNITED STATES | EGLIN AFB | | A | | | | | | | | | N/A | UNKNOWN |
| 10/25/62 | 2328 | AC 03.138 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 213 | HINTEREGGER, H. E. |
| 10/26/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | | D | | | | | | | | N/A | CHAMPION, K. |
| 10/26/62 | | ATLAS POD | UNITED STATES | VANDENBURG AFB | | G | | | | | | | | | N/A | BLOCK, L. |
| 10/26/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 10/27/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 10/29/62 | | | UNITED STATES | BARKING SANDS | | V | | | | | | | | | N/A | SMITH, L. B. |
| 10/30/62 | 0150 | NASA 4.54 UG | UNITED STATES | WALLOPS ISLAND | | | | | | | D | | | | 188 | CODE, A. D. |
| 11/01/62 | | HONEST JOHN-NI | UNITED STATES | JOHNSTON ISLAND | | | C<br>D | | | | | | | | N/A | ULWICK, S.<br>SAGALYN, R. G. |
| 11/01/62 | | HONEST JOHN-NI | UNITED STATES | JOHNSTON ISLAND | | | C<br>D | | | | | | | | N/A | ULWICK, S.<br>SAGALYN, R. G. |
| 11/01/62 | | HONEST JOHN-NI | UNITED STATES | JOHNSTON ISLAND | | | C<br>D | | | | | | | | N/A | ULWICK, S.<br>SAGALYN, R. G. |
| 11/01/62 | | HONEST JOHN-NI | UNITED STATES | JOHNSTON ISLAND | | | C<br>D | | | | | | | | N/A | ULWICK, S.<br>SAGALYN, R. G. |
| 11/01/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 11/01/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | | D | | | | | | | | N/A | CHAMPION, K. |
| 11/01/62 | 1125 | AC 06.439 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 11/02/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | | D | | | | | | | | N/A | CHAMPION, K. |
| 11/03/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 11/04/62 | | NIKE-CAJUN | UNITED STATES | JOHNSTON ISLAND | | | D | | | | | | | | N/A | CHAMPION, K. |
| 11/05/62 | | AGENA | UNITED STATES | VANDENBURG AFB | | | | A | | | | | | | N/A | YAGODA, H. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/05/62 | 1129 | AC 06.440 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 11/06/62 | 0800 | AC 06.445 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 11/07/62 | 1025 | NASA 10.99 CI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | D<br>A | 132 | SMITH, L. G.<br>BOURDEAU, R. E. |
| 11/07/62 | 1053 | NASA 14.16 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 165 | MANRING, E. R. |
| 11/10/62 | | AEROBEE | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 11/11/62 | 0103 | AC 03.452 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 11/13/62 | 1010 | SL-114 | UNITED KINGDOM | WOOMERA | | | | | | F | | A | | | 206 | UNKNOWN |
| 11/13/62 | 2330 | AC 03.453 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 11/15/62 | | AEROBEE | UNITED STATES | EGLIN AFB | | | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 11/16/62 | 0126 | AC 03.449 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 11/18/62 | 0457 | NASA 4.27 NP | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | D | 206 | CORPAS, E. L. |
| 11/20/62 | 1655 | NASA 1.14 NA | UNITED STATES | WHITE SANDS | C | | | | | | | | | | 20 | BARTH, C. A. |
| 11/20/62 | 2141 | NASA 6.06 GA | UNITED STATES | WALLOPS ISLAND | | C<br>F | C<br>E | | | | | | | | 345 | BRACE, L. H. |
| 11/27/62 | | | ARGENTINA | CHAMICAL | | V | | | | | | | | | N/A | TABANERA, T. M. |
| 11/27/62 | | HONEST JOHN-NI | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 11/27/62 | 1017 | HAD 112 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 113 | UNKNOWN |
| 11/27/62 | 1800 | NASA 4.21 US | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 203 | GOLDBERG, L. |
| 11/28/62 | | | ALGERIA | HAMMAGUIR | | V | | | | | | | | | N/A | BLAMONT, J. E. |
| 11/28/62 | 0000 | AC 20.454 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 11/28/62 | 1017 | SL-165 | UNITED KINGDOM | WOOMERA | | Y<br>Z<br>V | | | | | | | | | 230 | UNKNOWN |
| 11/30/62 | | | ALGERIA | HAMMAGUIR | | V | | | | | | | | | N/A | BLAMONT, J. E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/30/62 | | | ARGENTINA | CHAMICAL | | V | | | | | | | | | N/A | TABANERA, T. M. |
| 11/30/62 | 1057 | NASA 10.108 CI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | A<br>D | 122 | SMITH, L. G.<br>BOURDEAU, R. E. |
| 11/30/62 | 1115 | NASA 14.17 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 170 | MANRING, E. R.<br>SMITH, W. S. |
| 12/01/62 | | | ALGERIA | HAMMAGUIR | | V | | | | | | | | | N/A | BLAMONT, J. E. |
| 12/01/62 | 1806 | NASA 14.32 GI | UNITED STATES | WALLOPS ISLAND | | | B<br>E | | | | | | | B | 169 | BAUER, S. J. |
| 12/01/62 | 2034 | NASA 14.20 UA | UNITED STATES | WALLOPS ISLAND | | A<br>B<br>C<br>F | | | | | | | | | 131 | HORVATH, J. J.<br>SMITH, W. S. |
| 12/01/62 | 2125 | NASA 10.45 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 126 | SMITH, W. S. |
| 12/01/62 | 2134 | NASA 10.68 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 108 | SMITH, W. S.<br>THEON, J. S. |
| 12/03/62 | | NIKE-APACHE | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/03/62 | | NIKE-APACHE | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/03/62 | | NIKE-APACHE | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/03/62 | | HONEST JOHN-NI | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/03/62 | 2320 | NASA 14.46 AA | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 222 | ROSENBERG, N. W.<br>DUBIN, M. |
| 12/04/62 | | | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/04/62 | 0345 | ACS 00.467 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/04/62 | 0445 | AC 20.455 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/04/62 | 0706 | NASA 10.67 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 114 | SMITH, W. S.<br>THEON, J. S. |
| 12/04/62 | 0719 | NASA 10.46 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 50 | SMITH, W. S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/04/62 | 0756 | SL-166 | UNITED KINGDOM | WOOMERA | | Y<br>Z | | | | | | | | | 105 | UNKNOWN |
| 12/05/62 | 2200 | NASA 10.109 CI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | A | 128 | SMITH, L. G.<br>BOURDEAU, R. E. |
| 12/06/62 | 0532 | NASA 10.47 GA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 119 | SMITH, W. S. |
| 12/06/62 | 0543 | NASA 10.66 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 122 | SMITH, W. S.<br>THEON, J. S. |
| 12/06/62 | 1021 | AC 20.457 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/07/62 | | AEROBEE | UNITED STATES | EGLIN AFB | | | | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/08/62 | 0108 | AC 03.450 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/10/62 | | NIKE-CAJUN | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/11/62 | | NASA FERDINAND | UNITED STATES | ANDOYA | | | C | | | | | | | | 121 | UNKNOWN |
| 12/11/62 | 0130 | AC 06.447 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/12/62 | 2346 | AC 20.456 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/14/62 | | NASA FERDINAND | UNITED STATES | ANDOYA | | | C | | | | | | | | 123 | UNKNOWN |
| 12/14/62 | | HONEST JOHN-NI | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/15/62 | 0052 | AC 20.458 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/15/62 | 1730 | AC 03.451 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 12/18/62 | 0503 | K-C8<br>S-028-001 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 202 | TAKAKURA, T.<br>KIMURA, I. |
| 12/18/62 | 0503 | K-C8-11<br>S-C28-002 | JAPAN | KAGOSHIMA | | E | | | | | | | | | 202 | TAKEUCHI, H.<br>IMAI, T.<br>OTSUKA, K.<br>OYA, K. |
| 12/18/62 | 0503 | K-C8-11<br>S-C28-003 | JAPAN | KAGOSHIMA | | | | | A | | | | | | 202 | AOYAMA, I.<br>SHIMIZU, Y.<br>IIZUKA, I. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE(KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/21/62 | | ATLAS | UNITED STATES | CAPE KENNEDY | | | | | | | | | | D | N/A | BLOCK,L. |
| 01/17/63 | 0144 | NASA 10.80 NA | UNITED STATES | WALLOPS ISLAND | C D | | | | | | | | | | 74 | POTTER,A.E. |
| 01/27/63 | 0100 | | USSR | KAPUSTIN YAR | | | | | | | | | | | N/A | UNKNOWN |
| 02/12/63 | 0147 | NASA 11.06 UE | UNITED STATES | VANDENBURG AFB | | | C | C | | | | | | C | 1675 | WINCKLER,J.R. |
| 02/13/63 | | NC 20.133 | UNITED STATES | VANDENBURG AFB | C | | | | | E | | | | | N/A | HOFFMAN,J.H.<br>MANGE,P.W.<br>GULLEDGE,I.S. |
| 02/13/63 | 2430 | AB 03.345 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 234 | FAUCHER,A.G. |
| 02/14/63 | 0030 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 155 | UNKNOWN |
| 02/15/63 | 1634 | NC 3.134 | UNITED STATES | WHITE SANDS | | | D E | | | | | | | | 239 | JOHNSON,C.Y.<br>YOUNG,J.M.<br>HOLMES,J.C. |
| 02/18/63 | 1743 | NE 3.140 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 306 | PURCELL,J.D.<br>AUSTIN,W.E.<br>GARRETT,D.L. |
| 02/20/63 | 2318 | NASA 14.35 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 164 | BEDINGER,J.F. |
| 02/20/63 | 2334 | NASA 10.58 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 113 | SMITH,W.S.<br>THEON,J.S. |
| 02/20/63 | 2347 | NASA 10.48 GA | UNITED STATES | WALLOPS ISLAND | | A C | | | | | | | | | 113 | SMITH,W.S. |
| 02/21/63 | 2316 | NASA 14.39 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 172 | BEDINGER,J.F. |
| 02/27/63 | 1930 | NASA 14.86 CI | UNITED STATES | WALLOPS ISLAND | | | C E | | | E F | | | | | 151 | SMITH,L.G. |
| 02/28/63 | 2148 | NASA 10.59 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 113 | SMITH,W.S.<br>THEON,J.S. |
| 02/28/63 | 2211 | NASA 10.53 GA | UNITED STATES | WALLOPS ISLAND | | A C | | | | | | | | | 103 | SMITH,W.S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/01/63 | 0120 | SL-084 | UNITED KINGDOM | WOOMERA | | | C<br>E | | | F | | | | | 209 | UNKNOWN |
| 03/02/63 | 0030 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 61 | UNKNOWN |
| 03/06/63 | 2230 | AC 03.372 | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 228 | COHEN,H.A. |
| 03/08/63 | 1930 | NASA 14.107 GI | UNITED STATES | WALLOPS ISLAND | | | B<br>C | | | | | | | | 155 | WHIPPLE,E.C. |
| 03/09/63 | 0001 | NASA 10.54 GA | UNITED STATES | WALLOPS ISLAND | | A<br>C | | | | | | | | | 119 | SMITH,W.S.<br>KATCHEN,L.B. |
| 03/09/63 | 0001 | NASA 10.60 CA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 117 | SMITH,W.S.<br>THEON,J.S. |
| 03/11/63 | 0430 | SL-085 | UNITED KINGDOM | WOOMERA | | | C<br>E | | | F | | | | | 209 | UNKNOWN |
| 03/12/63 | 0950 | HAD 116 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 124 | UNKNOWN |
| 03/16/63 | 0219 | NASA 4.70 CG | UNITED STATES | WALLOPS ISLAND | | | | | | | F | | | | 201 | FISHER,P.C. |
| 03/19/63 | 1800 | AC 03.149 | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 99 | JURSA,A.<br>URSA,A. |
| 03/21/63 | 0930 | HAD 118 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 133 | UNKNOWN |
| 03/28/63 | 0015 | NASA 4.30 GG | UNITED STATES | WHITE SANDS | E | | | | | | | | | | 300 | BOGGESS,A. |
| 03/28/63 | 0754 | NASA 14.08 UA | UNITED STATES | WALLOPS ISLAND | | F<br>G | C<br>D | | | | | | | | 190 | SCHAEFER,E.J. |
| 03/28/63 | 0800 | NIKE-APACHE | UNITED STATES | WALLOPS ISLAND | | | B | | | | | | | | 190 | UNKNOWN |
| 03/28/63 | 2006 | NASA 14.87 CI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | E<br>F | | | | | 161 | SMITH,L.G. |
| 03/29/63 | 0257 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 120 | UNKNOWN |
| 04/03/63 | 1646 | NASA 4.58 UI | UNITED STATES | WALLOPS ISLAND | | | A<br>F | | | | | | | | 237 | RORDEN,L.H.<br>ORSAC,L.E.<br>MILLS,M.E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/04/63 | 1500 | NB 3.118 | UNITED STATES | WHITE SANDS | | | | | | F D | | | | | 205 | BLAKE, R. L. UNZICKER, A. E. |
| 04/09/63 | 2028 | NASA 14.108 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | E F | | | | | 163 | KANE, J. A. |
| 04/12/63 | 0530 | NASA 4.96 II | UNITED STATES | WALLOPS ISLAND | | | A C | | | | | | | | 198 | CARTWRIGHT, D. G. |
| 04/17/63 | 0923 | SL-167 | UNITED KINGDOM | WOOMERA | | Y V Z | | | | | | | | | 236 | UNKNOWN |
| 04/18/63 | 2100 | NASA 6.07 GA | UNITED STATES | WALLOPS ISLAND | | C F | C E | | | | | | | | 342 | CARIGNAN, G. R. MAURER, J. C. |
| 04/23/63 | 2048 | NASA 4.44 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 199 | BAUER, S. J. STONE, R. G. |
| 04/30/63 | 0400 | NB 3.130 | UNITED STATES | WHITE SANDS | | | | | | | D F | | | | 197 | BYRAM, E. T. |
| 05/02/63 | 1703 | AC 03.510 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 232 | HINTEREGGER, H. E. |
| 05/07/63 | 2031 | BLACK BRANT II | CANADA | FORT CHURCHILL | | | A B D | | | | | | | | 139 | HEIKKILA, W. J. A. MATHEWS, D. L. |
| 05/07/63 | 2115 | NASA 4.98 UA | UNITED STATES | WALLOPS ISLAND | | E G | | | | | | | | | 223 | FASTIE, W. G. |
| 05/08/63 | 1723 | NASA 14.110 CA | UNITED STATES | WALLOPS ISLAND | | | C D | | | | | | | | 166 | SHARP, G. W. |
| 05/09/63 | 1802 | NASA 4.97 II | UNITED STATES | WALLOPS ISLAND | | | A C | | | | | | | | 203 | CARTWRIGHT, D. G. |
| 05/10/63 | 1445 | NE 3.140R | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 214 | GARRETT, D. L. AUSTIN, W. E. PURCELL, J. D. |
| 05/15/63 | 2000 | AC 06.472 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 156 | ROSENBERG, N. W. |
| 05/16/63 | 0100 | NA-CLAIR | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/16/63 | 1438 | NASA 10.77 IA | UNITED STATES | SONMIANI | | V | | | | | | | | | 146 | DUBIN, M. |
| 05/17/63 | | NIKE-APACHE | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 05/17/63 | | NIKE-APACHE | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 05/18/63 | 0006 | NA-SARA | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 05/18/63 | 0106 | NASA 14.141 DA | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 185 | ROSENBERG, N. W. |
| 05/18/63 | 0318 | NA-STELLA | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 05/18/63 | 0418 | AC 05.469 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 05/18/63 | 0755 | AC 06.473 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 167 | ROSENBERG, N. W. |
| 05/18/63 | 1006 | NASA 14.140 DA | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 187 | ROSENBERG, N. W. |
| 05/18/63 | 1006 | NA-BLANCHE | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 43 | UNKNOWN |
| 05/20/63 | | NASA 14.137 IA | UNITED STATES | SARDINIA | | V | | | | | | | | | N/A | BROGLIO, L. |
| 05/20/63 | 0209 | K-(9M-02<br>S-029 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 341 | TAKAKURA, T.<br>OGAWA, T.<br>KIMURA, I.<br>OYA, H.<br>OBAYASHI, T.<br>URIMOTO, S. |
| 05/21/63 | | NASA 14.138 IA | UNITED STATES | SARDINIA | | V | | | | | | | | | N/A | BROGLIO, L. |
| 05/21/63 | | NASA 14.139 IA | UNITED STATES | SARDINIA | | V | | | | | | | | | N/A | BROGLIO, L. |
| 05/21/63 | | | ALGERIA | HAMMAGUIR | | V | | | | | | | | | N/A | BLAMONT, J. E. |
| 05/21/63 | | | ALGERIA | REGGANE | | V | | | | | | | | | N/A | BLAMOUT, J. E. |
| 05/21/63 | | | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | N/A | BEDINGER, J. F. |
| 05/21/63 | | | FRANCE | ILE DU LEVANT | | V | | | | | | | | | N/A | BLAMONT, J. E. |
| 05/21/63 | | NIKE-CAJUN | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 05/21/63 | 0530 | NB 3.119 | UNITED STATES | WHITE SANDS | | | | | | | D<br>F | | | | 192 | BYRAM, E. T. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/22/63 | 0110 | NASA 1C.130 DA | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 135 | ROSENBERG, N.W. |
| 05/22/63 | 0410 | NASA 14.13 CA | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 186 | MANRING, E.R. |
| 05/22/63 | 0751 | NASA 14.14 CA | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 184 | MANRING, E.<br>ANRING, E.R. |
| 05/23/63 | | | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | | N/A | MANRING, E.R. |
| 05/23/63 | 0413 | NASA 14.15 CA | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 200 | MANRING, E.R. |
| 05/23/63 | 0846 | SL-115 | UNITED KINGDOM | WOOMERA | | | A | | | F | | | | | 201 | UNKNOWN |
| 05/24/63 | 0045 | NASA 14.40 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 205 | BEDINGER, J.F. |
| 05/25/63 | 0047 | NASA 14.42 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 197 | BEDINGER, J.F. |
| 05/29/63 | 0435 | SL-127 | UNITED KINGDOM | WOOMERA | | | C | | | F | | | | | 209 | UNKNOWN |
| 06/06/63 | 1430 | NC 3.115 F | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 208 | HOFFMAN, J.H.<br>NIER, A.O.C. |
| 06/10/63 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | | | | | N/A | SALISBURY, J.W. |
| 06/11/63 | 0506 | BLACK BRANT II | CANADA | FORT CHURCHILL | | | A<br>B<br>D | | | | | | | | 135 | HEIKKLA, W.J.A.<br>MATHEWS, D.L. |
| 06/11/63 | 0515 | AC 03.354 | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 302 | SALISBURY, J.W. |
| 06/17/63 | 1800 | NASA 4.87 GT | UNITED STATES | WHITE SANDS | | | | | | | | | | A | 182 | RORDEN, L.H.<br>ORSAC, L.E.<br>MILLS, M.E. |
| 06/18/63 | 0328 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 120 | UNKNOWN |
| 06/18/63 | 0328 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 102 | UNKNOWN |
| 06/20/63 | 0520 | SL-C46 | UNITED KINGDOM | WOOMERA | | | C<br>E | | | F | | | | | 227 | UNKNOWN |
| 06/20/63 | 1425 | NASA 4.61 AS | UNITED STATES | WHITE SANDS | | | | | | | | | | C | 195 | PACKER, D.M. |
| 06/25/63 | | | UNITED STATES | WHITE SANDS | B | | | | | | | | | | 150 | WALLACE, R.<br>NIDEY, R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/28/63 | | NE 3.129 | UNITED STATES | | | | | | | | | | | | N/A | UNKNOWN |
| 06/28/63 | 0010 | NIKE-ASP II | UNITED STATES | | | | C | | | | | | | | N/A | UNKNOWN |
| 06/28/63 | 1430 | NASA 4.62 AS | UNITED STATES | WHITE SANDS | | | | | | C E | | | | | 204 | PACKER, D. M. |
| 06/29/63 | 1646 | AC 03.607 | UNITED STATES | EGLIN AFB | | | X | | | | | | | | 156 | ULWICK, J. C. |
| 07/02/63 | 1418 | NASA 8.14 GI | UNITED STATES | WALLOPS ISLAND | | | C E D A | | | | | | | | 934 | BAUER, S. J. |
| 07/03/63 | 0900 | AB 03.247 | UNITED STATES | EGLIN AFB | | | C E | | | | | | | A | 199 | SAGALYN, R. C. |
| 07/10/63 | 0246 | NASA 4.59 UI | UNITED STATES | WALLOPS ISLAND | | | A F | | | | | | | C | 204 | RORDEN, L. H.<br>BOURDEAU, R. E. |
| 07/10/63 | 1702 | AC 03.511 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 225 | HINTEREGGER, H. E. |
| 07/19/63 | 0530 | NASA 4.37 GG | UNITED STATES | WALLOPS ISLAND | | | | | | | C | | | | 185 | STECHER, T. P. |
| 07/20/63 | 1518 | NASA 4.77 GS | UNITED STATES | WHITE SANDS | | | | | | C E | | | | D | 213 | LINDSAY, J. C.<br>HALLAM, K. L. |
| 07/20/63 | 2103 | NASA 14.91 CI | UNITED STATES | FORT CHURCHILL | | | C E | | | D F | | | | | 196 | SMITH, L. G. |
| 07/20/63 | 2113 | NASA 14.92 CI | UNITED STATES | FORT CHURCHILL | | | C E | | | D F | | | | | 199 | SMITH, L. G. |
| 07/20/63 | 2140 | NASA 14.93 CI | UNITED STATES | FORT CHURCHILL | | | C E | | | D F | | | | | 200 | SMITH, L. G. |
| 07/20/63 | 2154 | NASA 6.08 GA | UNITED STATES | WALLOPS ISLAND | | C F | C E | | | | | | | | 338 | BRACE, L. H. |
| 07/20/63 | 2210 | NASA 14.94 CI | UNITED STATES | FORT CHURCHILL | | | C E | | | D F | | | | | 192 | SMITH, L. G. |
| 07/20/63 | 2215 | AB 17.199 | UNITED STATES | FORT CHURCHILL | B | | D | | | | | | | | 143 | ULWICK, J. C. |
| 07/23/63 | 0600 | NASA 4.29 GG | UNITED STATES | WALLOPS ISLAND | | | | | | | X | | | | 177 | STECHER, T. P. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE(KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/25/63 | 2238 | AC 13.831 | UNITED STATES | EGLIN AFB | | | A | | | | | | | | 623 | WONG,M. |
| 07/26/63 | 2306 | AC 17.601 | UNITED STATES | FORT CHURCHILL | B | | D | | | | | | | | 143 | ULWICK,J.C. |
| 07/27/63 | 0010 | NASA K63-1 | UNITED STATES SWEDEN | KRONOGARD | | Z | | | | | | | | | 126 | WITT,G. MARTIN-LOF,J. |
| 07/27/63 | 1415 | NB 3.124 | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 200 | BLAKE,R.L. KREPLIN,R.W. |
| 07/29/63 | 2328 | NASA K63-2 | UNITED STATES SWEDEN | KRONOGARD | | Z | | | | | | | | | 128 | WITT,G. MARTIN-LOF,J. |
| 07/30/63 | | AP-3 | UNITED STATES | CAPE KENNEDY | | | | | | | A | | | | 110 | ULWICK,J.C. |
| 08/01/63 | 0556 | SL-126 | UNITED KINGDOM | WOOMERA | | | C | | | F | | | | | 196 | UNKNOWN |
| 08/01/63 | 2327 | NASA K63-3 | UNITED STATES SWEDEN | KRONOGARD | | Z | | | | | | | | | 126 | WITT,G. MARTIN-LOF,J. |
| 08/02/63 | 2333 | NASA 10.75 LA | UNITED STATES | WALLOPS ISLAND | | F | | | | | | | | | 151 | HANSEN,W.H. PETERSON,J.W. |
| 08/07/63 | 2229 | NASA K63-4 | UNITED STATES SWEDEN | KRONOGARD | | Z | | | | | | | | | 130 | WITT,G. MARTIN-LOF,J. |
| 09/03/63 | 2236 | AD 03.374 | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 288 | COHEN,H.A. |
| 09/04/63 | 1311 | NASA 4.91 GE | UNITED STATES | FORT CHURCHILL | | | | A | | | | | | | 228 | FICHTEL,C.E. NEELAKANTAN,K.A. |
| 09/06/63 | 2130 | NASA 4.22 LS | UNITED STATES | WHITE SANDS | | | | | | D | | | | C | 222 | GOLDBERG,L. |
| 09/09/63 | 1602 | NASA 14.06 UE | UNITED STATES | WALLOPS ISLAND | | | B | | | | | | | A | 169 | CAHILL,L.J. |
| 09/11/63 | 1424 | NASA 4.32 NP | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | D | 165 | CORPAS,E.L. |
| 09/12/63 | 0620 | NASA FERDINAND | UNITED STATES | ANDOYA | | | A C | C | | D | | | | | 136 | KANE,J.A. |
| 09/20/63 | 1545 | NE 3.151 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 208 | PURCELL,J.D. AUSTIN,W.E. |
| 09/23/63 | | NIKE-APACHE | UNITED STATES | EGLIN AFB | E | V | C | | | | | | | | N/A | ROSENBERG,N.W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/24/63 | 0315 | AC 05.475 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 09/25/63 | 0357 | NASA 10.92 NA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 143 | TOLEFSON, H. B. |
| 09/25/63 | 0709 | NASA 4.65 GI | UNITED STATES | WALLOPS ISLAND | | | C E A | | | | | | | | 224 | HIRAO, K. |
| 09/25/63 | 1537 | AC 05.476 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 09/25/63 | 1630 | AC 05.477 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 09/26/63 | 0437 | NA-WANDA | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 09/26/63 | 0530 | NA-VIOLET | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 09/26/63 | 1830 | AC 03.151 | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 98 | JURSA, A.<br>URSA, A. |
| 09/28/63 | 1443 | NASA 4.64 GI | UNITED STATES | WALLOPS ISLAND | | | C E | | | | | | | | 226 | HIRAO, K. |
| 10/00/63 | | TITAN | UNITED STATES | CAPE KENNEDY | | | | | | | | | | X | N/A | BLOCK, L. |
| 10/01/63 | 0947 | AC 05.478 | UNITED STATES | EGLIN AFB | | | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/01/63 | 1700 | NASA 4.78 GS | UNITED STATES | WHITE SANDS | | | | | | C E | | | | | 219 | HALLAM, K. L. |
| 10/02/63 | 1510 | SL-C61A | UNITED KINGDOM | WOOMERA | | | C | | | | | | | A | 148 | UNKNOWN |
| 10/07/63 | 2000 | NASA 14.36 DA | UNITED STATES | FORT CHURCHILL | | | | | A | | | | | | 165 | ZANCANATA, H. |
| 10/09/63 | 2314 | NASA 14.102 NA | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | X | 158 | POTTER, A. E. |
| 10/10/63 | 1600 | BOOSTER ARCAS | UNITED STATES | WHITE SANDS | | | X | | | | | | | | 81 | UNKNOWN |
| 10/10/63 | 2313 | NASA 14.103 NA | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | X | 157 | POTTER, A. E. |
| 10/14/63 | 0534 | BLACK BRANT II | CANADA | FORT CHURCHILL | | | D A D | | | | | | | | 145 | HEIKKLA, W. J. A.<br>MATHEWS, D. L. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/15/63 | 0951 | SL-171 | UNITED KINGDOM | WOOMERA | | V<br>Y<br>Z | | | | | | | | | 210 | UNKNOWN |
| 10/15/63 | 1148 | SL-169 | UNITED KINGDOM | WOOMERA | | Z<br>Y | | | | | | | | | 139 | UNKNOWN |
| 10/15/63 | 1605 | NASA 4.33 GS | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 197 | MUNEY, W. S. |
| 10/16/63 | 1509 | SL-170 | UNITED KINGDOM | WOOMERA | | Z<br>Y | | | | | | | | | 140 | UNKNOWN |
| 10/16/63 | 1922 | SL-168 | UNITED KINGDOM | WOOMERA | | Z<br>V<br>Y | | | | | | | | | 180 | UNKNOWN |
| 10/17/63 | 1650 | NASA 4.93 II | UNITED STATES | WALLOPS ISLAND | | | B | | | | | | | | 187 | STOREY, L. R. O. |
| 10/31/63 | 1650 | NASA 4.94 II | FRANCE | WALLOPS ISLAND | | | B | | | | | | | | 187 | STOREY, L. R. O. |
| 10/31/63 | 1800 | AC 06.341 | UNITED STATES | EGLIN AFB | | | C<br>D | | | | | | | | 111 | NARCISI, R. S. |
| 10/31/63 | 2117 | NASA 14.111 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A<br>B | 134 | WILLIAMS, L. A. |
| 11/01/63 | | TITAN POD | UNITED STATES | CAPE KENNEDY | | | C | | | | | | | D | N/A | ULWICK, J. C.<br>OCK, L. |
| 11/04/63 | | NIKE-CAJUN | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 11/04/63 | | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 11/12/63 | 1858 | NASA 4.76 UA | UNITED STATES | WALLOPS ISLAND | | C | | | | | | | | | 223 | FASTIE, W. G. |
| 11/13/63 | 2300 | AD 03.324 | UNITED STATES | WHITE SANDS | C | | | | | | | | | | 262 | SILVERMAN, S. |
| 11/17/63 | 1815 | NASA 4.85 NA | UNITED STATES | WALLOPS ISLAND | C<br>D | | | | | | | | | | 370 | BARTH, C. A. |
| 11/21/63 | 1255 | NASA 14.128 IA | UNITED STATES | THUMBA | | V | | | | | | | | | 202 | BHAVSAR, P. D. |
| 11/21/63 | 1295 | INCOSPAR 10.01 | INDIA | THUMBA | | V | | | | | | | | | 180 | BHAVSAR, P. D. |
| 11/26/63 | 1816 | NASA 14.10 UA | UNITED STATES | WALLOPS ISLAND | | F | C | | | | | | | | 172 | SCHAEFER, E. J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 2 3 4 5 6 7 8 9 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|
| 11/26/63 | 1844 | NASA 10.131 UA | UNITED STATES | WALLOPS ISLAND | Y | 151 | HANSEN, W.H.<br>PETERSON, J.W. |
| 12/06/63 | 2340 | HAD 301 | AUSTRALIA | WOOMERA | E | 54 | UNKNOWN |
| 12/07/63 | 1311 | NASA 10.55 GA | UNITED STATES | WALLOPS ISLAND | Z | 103 | SMITH, W.S. |
| 12/07/63 | 1343 | NASA 14.21 | UNITED STATES | WALLOPS ISLAND | A<br>B<br>C<br>F | 141 | HORVATH, J.J. |
| 12/11/63 | 0500 | L -C2 -02<br>S -030-001 | JAPAN | KAGOSHIMA | A | 402 | KIMURA, I.<br>IWAI, A.<br>KAMADA, T.<br>OBAYASHI, T.<br>URIMOTO, S. |
| 12/11/63 | 0500 | L -C2 -02<br>S -030-002 | JAPAN | KAGOSHIMA | A | 402 | YAMAMOTO, M.<br>URIMOTO, S. |
| 12/11/63 | 0503 | L -C2 -02<br>S -030-032 | JAPAN | KAGOSHIMA | A | 402 | TAKEUCHI, E.<br>IMAI, T.<br>OTSUKA, K.<br>OYA, K.<br>TOI, A.<br>SASAKI, H.<br>KIKUCHI, K.<br>MATSUSHIMA, K. |
| 12/12/63 | | TITAN 2 | UNITED STATES | CAPE KENNEDY | D | N/A | BLOCK, L. |
| 12/12/63 | 1650 | AD 03.513 | UNITED STATES | WHITE SANDS | E | 325 | HINTEREGGER, H.E. |
| 12/12/63 | 1906 | HAD 122 | AUSTRALIA | WOOMERA | Y | N/A | UNKNOWN |
| 12/13/63 | 1900 | BOOSTER ARCAS | UNITED STATES | WHITE SANDS | X | 99 | UNKNOWN |
| 12/17/63 | | TITAN 2 | UNITED STATES | VANDENBURG AFB | D | N/A | BLOCK, L. |
| 12/21/63 | | | INDIA | THUMBA | V | 124 | UNKNOWN |
| 01/08/64 | 1315 | NASA 14.129 IA | UNITED STATES | THUMBA | V | 171 | BHAVSAR, P.D. |
| 01/12/64 | 0026 | NASA 14.130 IA | UNITED STATES | THUMBA | V | 171 | BHAVSAR, P.D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/12/64 | 2030 | NASA 14.28 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 144 | SORGNIT, E. F. |
| 01/15/64 | | TITAN 2 | UNITED STATES | CAPE KENNEDY | | | | | | | | | | D | N/A | BLOCK, L. |
| 01/15/64 | 0231 | NASA 14.150 UE | UNITED STATES | WALLOPS ISLAND | C | | | C | | | | | | | 90 | O'BRIEN, B. J. |
| 01/15/64 | 2240 | NASA 14.106 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 114 | BEDINGER, J. F. |
| 01/16/64 | 0500 | NASA 14.125 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 170 | BEDINGER, J. F. |
| 01/16/64 | 1134 | NASA 14.126 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 200 | BEDINGER, J. F. |
| 01/17/64 | 0501 | NASA 8.31 DA | UNITED STATES | WALLOPS ISLAND | C | G | C D | | | | | | | | 925 | HOFFMAN, J. H. |
| 01/24/64 | 0016 | NASA 10.61 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 119 | SMITH, W. S. |
| 01/25/64 | 0514 | NASA 14.79 UE | UNITED STATES | THUMBA | | | B | | | | | | | | 164 | CAHILL, L. J. |
| 01/27/64 | 0430 | NASA 14.80 UE | UNITED STATES | THUMBA | | | B | | | | | | | | 164 | CAHILL, L. J. |
| 01/28/64 | 1900 | NASA 4.88 GT | UNITED STATES | WHITE SANDS | | | | | | | | | | A | 126 | RUSSELL, W. A., JR. |
| 01/29/64 | 0309 | NASA 6.09 GA | UNITED STATES | WALLOPS ISLAND | | C F | C E | | | | | | | A | 309 | CARIGNAN, G. R. |
| 01/29/64 | 0411 | NASA 10.71 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 254 | SMITH, W. S. |
| 01/29/64 | 0417 | NASA 10.89 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 122 | SACHER, P. A.<br>SMITH, W. S. |
| 01/29/64 | 0418 | NASA 10.81 GA | UNITED STATES | ASCENSION ISLAND | | Z | | | | | | | | | 124 | THEON, J. S. |
| 01/29/64 | 1000 | NASA 14.81 UE | UNITED STATES | THUMBA | | | B | | | | | | | | 167 | CAHILL, L. J. |
| 01/30/64 | 0309 | | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | C | N/A | UNKNOWN |
| 01/31/64 | 1330 | NASA 14.82 UE | UNITED STATES | THUMBA | | | B | | | | | | | | 167 | CAHILL, L. J. |
| 02/04/64 | 0135 | NASA 14.22 UA | UNITED STATES | ASCENSION ISLAND | | A B C F | | | | | | | | | 158 | HORVATH, J. J. |
| 02/04/64 | 0146 | NASA 10.62 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 116 | SMITH, W. S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/05/64 | 0039 | NASA 10.87 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 126 | SACHER, P. A.<br>SMITH, W. S. |
| 02/05/64 | 0320 | NASA 10.63 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 119 | SMITH, W. S. |
| 02/09/64 | 0411 | AC 03.605 | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 228 | ULWICK, J. C. |
| 02/09/64 | 0412 | AC -3 -603 | UNITED STATES<br>CANADA | FORT CHURCHILL | | | C<br>E | | | | | | | | 228 | ULWICK, J. C. |
| 02/12/64 | 0946 | HAD 124 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | 75 | UNKNOWN |
| 02/12/64 | 2030 | NASA 14.28 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 145 | SORGNIT, E. F. |
| 02/13/64 | 0429 | NASA 10.88 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 119 | SACHER, P. A.<br>SMITH, W. S. |
| 02/13/64 | 0430 | NASA 10.136 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 119 | SMITH, W. S. |
| 02/13/64 | 0455 | NASA 10.82 GA | UNITED STATES | ASCENSION ISLAND | | Z | | | | | | | | | 119 | THEON, J. S. |
| 02/13/64 | 1828 | HOPI-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 02/13/64 | 2145 | HOPI-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 02/14/64 | 0557 | CENTAURE | FRANCE | HAMMAGUIR | | V | | | | | | | | | N/A | UNKNOWN |
| 02/14/64 | 0557 | CENTAURE | FRANCE | HAMMAGUIR | | V | | | | | | | | | N/A | UNKNOWN |
| 02/14/64 | 2103 | HOPI-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 02/15/64 | 0557 | CENTAURE | FRANCE | HAMMAGUIR | | V | | | | | | | | | N/A | UNKNOWN |
| 02/17/64 | 1000 | ND 3.143 | UNITED STATES | WHITE SANDS | C | | | | | C<br>D | | | | | 268 | GULLEDGE, I. S.<br>KOOMEN, M. J.<br>PACKER, D. M. |
| 02/18/64 | | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 02/19/64 | 2130 | NIKE-CAJUN | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 02/20/64 | 0723 | NASA 14.43 GE | UNITED STATES | FORT CHURCHILL | | | | B<br>C<br>D | | | | | | | 204 | EVANS, D. S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/27/64 | 0318 | NASA 4.124 UA | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 161 | FASTIE, W.G.<br>DUBIN, M. |
| 02/29/64 | 0532 | NASA 14.44 GE | UNITED STATES | FORT CHURCHILL | | | | B<br>C<br>D | | | | | | | 200 | EVANS, D.S. |
| 03/03/64 | 0208 | SL-129 | UNITED KINGDOM | WOOMERA | | | D | | A | | G | | | | 175 | UNKNOWN |
| 03/04/64 | 0953 | HAD 127 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | 111 | UNKNOWN |
| 03/07/64 | 0145 | NASA 10.137 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 114 | SMITH, W.S. |
| 03/10/64 | 0208 | SL-129 | UNITED KINGDOM | WOOMERA | | | | | A | F | | | | | 175 | UNKNOWN |
| 03/11/64 | 1800 | AC 06.342 | UNITED STATES | EGLIN AFB | | | D<br>C | | | | | | | | 100 | NARCISI, R.S. |
| 03/12/64 | 0207 | SL-128 | UNITED KINGDOM | WOOMERA | | | | | A | F | | | | | 176 | UNKNOWN |
| 03/12/64 | 0237 | SL-128 | AUSTRALIA | WOOMERA | | | B | | | | | | | | 170 | UNKNOWN |
| 03/12/64 | 0258 | NIKE APACHE | NORWAY | ANDOYA | | | | | | | | | | | 147 | RIEDLER, W. |
| 03/12/64 | 0300 | NASA FERDINAND | UNITED STATES | ANDOYA | | | A<br>C | C | | | | | | | 146 | KANE, J.A. |
| 03/12/64 | 0300 | F-06 | INTERNATIONAL<br>SWEDEN<br>UNITED STATES | ANDOYA | | | | | | F | | | | | N/A | RIEDLER, W.W. |
| 03/13/64 | | SCOUT JR. | UNITED STATES | CAPE KENNEDY | | | | | X | | | | | | N/A | HUTCHINSON, R. |
| 03/15/64 | 0244 | NASA FERDINAND | UNITED STATES | ANDOYA | | | A<br>C<br>D<br>E | C | | | | | | | 134 | KANE, J.A. |
| 03/18/64 | 0611 | NASA 14.151 UE | UNITED STATES | FORT CHURCHILL | C | | | C | | | | | | | 135 | O'BRIEN, B.J. |
| 03/19/64 | 1542 | NASA FERDINAND | UNITED STATES | ANDOYA | | | A<br>C | C | | F | | | | | 139 | KANE, J.A. |
| 03/20/64 | 0523 | NASA 14.152 UE | UNITED STATES | FORT CHURCHILL | C | | | C | | | | | | | 140 | O'BRIEN, B.J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/23/64 | | TITAN POD 2 | UNITED STATES | CAPE KENNEDY | | | C | | | | | | | D | N/A | ULWICK, J. C. OCK, L. |
| 03/23/64 | 1037 | NASA 14.153 UE | UNITED STATES | FORT CHURCHILL | C | | | C | | | | | | | 140 | O'BRIEN, B. J. |
| 03/24/64 | 0423 | NASA 14.118 GE | UNITED STATES | FORT CHURCHILL | | | | B C D | | | | | | | 188 | EVANS, D. S. |
| 03/26/64 | 0330 | NASA 14.119 GE | UNITED STATES | FORT CHURCHILL | | | | C | | | | | | | 193 | EVANS, D. S. |
| 03/28/64 | 2315 | | UNITED STATES | | | | C | | | | | | | | N/A | BOWLES |
| 03/30/64 | 1900 | AD 03.514 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 248 | HINTEREGGER, H. E. |
| 03/31/64 | 0715 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 64 | UNKNOWN |
| 04/00/64 | | TITAN | UNITED STATES | CAPE KENNEDY | | | | | | | | | | D | N/A | BLOCK, L. |
| 04/01/64 | | ATLAS POD | UNITED STATES | CAPE KENNEDY | | | | | | | | | | D | N/A | BLOCK, L. NEWMAN, P. |
| 04/03/64 | 0348 | NASA 4.15 GG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 190 | BOGGESS, A. |
| 04/03/64 | 0950 | | UNITED STATES | | | | D | | | | | | | | N/A | BOWLES |
| 04/08/64 | 0409 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 64 | UNKNOWN |
| 04/08/64 | 1825 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 64 | UNKNOWN |
| 04/11/64 | 0630 | NASA 14.121 UE | UNITED STATES | FORT CHURCHILL | B E | | | | | | | | | | 172 | MURCRAY, W. B. |
| 04/11/64 | 0919 | SL-136 | UNITED KINGDOM | WOOMERA | | G | | | | | | | | | 200 | UNKNOWN |
| 04/14/64 | 0832 | HAD 129 | AUSTRALIA UNITED KINGDOM | WOOMERA | | Y A | | | | | | | | | 121 | UNKNOWN |
| 04/15/64 | 0122 | NASA 14.24 UA | UNITED STATES | ASCENSION ISLAND | | A B C F | | | | | | | | | 156 | HORVATH, J. J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/15/64 | 1556 | NASA 14.23 UA | UNITED STATES | ASCENSION ISLAND | | A B C F | | | | | | | | | 158 | HORVATH, J. J. |
| 04/15/64 | 1645 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 64 | UNKNOWN |
| 04/15/64 | 2325 | NASA 12.03 GT -GI | UNITED STATES | WALLOPS ISLAND | | | C E | | | | | | | A | 727 | GUIDOTTI, J. G. |
| 04/16/64 | 2105 | NASA 14.143 UI | UNITED STATES | WALLOPS ISLAND | | | C D | | | | | | | | 168 | SMITH, L. G.<br>BOWHILL, S. A. |
| 04/17/64 | 2315 | NASA 10.142 GA | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | | 149 | HANSEN, W. H. |
| 04/18/64 | 0038 | NASA 10.73 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 119 | SMITH, W. S. |
| 04/18/64 | 0059 | NASA 10.83 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 119 | SMITH, W. S. |
| 04/22/64 | 0654 | NASA 14.123 UE | UNITED STATES | FORT CHURCHILL | B E | | | | | | | | | | 166 | MURCRAY, W. B. |
| 05/07/64 | 0231 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 110 | UNKNOWN |
| 05/12/64 | 1125 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 120 | UNKNOWN |
| 05/12/64 | 1125 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 107 | UNKNOWN |
| 05/14/64 | 0837 | HAD 126 | AUSTRALIA UNITED KINGDOM | WOOMERA | | Y A | | | | | | | | | 88 | UNKNOWN |
| 05/17/64 | | NIKE-APACHE | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 05/17/64 | | NIKE-APACHE | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 05/18/64 | 0620 | AE 05.479 | UNITED STATES | EGLIN AFB | | | | | | | | | | A | 208 | ROSENBERG, N. W. |
| 05/19/64 | 0645 | AE 05.481 | UNITED STATES | CAPE KENNEDY | | | | | | | | | | A | 205 | ROSENBERG, N. W. |
| 05/19/64 | 1800 | AE 05.482 | UNITED STATES | CAPE KENNEDY | | | | | | | | | | A | 260 | ROSENBERG, N. W. |
| 05/27/64 | 0430 | AD 03.355 | UNITED STATES | WHITE SANDS | | | | | | | F | | | B | 245 | SALISBURY, J. W. |
| 06/03/64 | 1845 | NASA 14.33 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | D | | | | | 140 | BAUER, S. J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/09/64 | | ASTROBEE | UNITED STATES | VANDENBURG AFB | | Y | | | | | | | | | N/A | FAUCHER, A.G. |
| 06/10/64 | 0503 | AC 15.373 | UNITED STATES | VANDENBURG AFB | | Y | | | | | | | | | 343 | FAUCHER, A.G. |
| 06/10/64 | 1245 | NASA 4.67 NP | UNITED STATES | WHITE SANDS | | | | | | | | A | | A | 155 | KINARD, W.H. |
| 06/10/64 | 1510 | NASA 14.155 GE | UNITED STATES | WALLOPS ISLAND | | | B | | | | | | | | 146 | DAVIS, T.N. |
| 06/11/64 | 0831 | HAD 128 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | Y<br>A | | | | | | | | | 113 | UNKNOWN |
| 06/16/64 | 0900 | NB 3.147 | UNITED STATES | WHITE SANDS | | | | | | | E<br>D | | | | 165 | BYRAM, E.T. |
| 06/17/64 | 0101 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 120 | UNKNOWN |
| 06/17/64 | 0110 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 102 | UNKNOWN |
| 06/17/64 | 1600 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 64 | UNKNOWN |
| 06/18/64 | | ATLAS POD | UNITED STATES | VANDENBURG AFB | | | | | | | | | | D | N/A | ULWICK, J.C. |
| 06/19/64 | 0129 | PMR-15 | UNITED STATES | | | Y | | | | | | | | | N/A | UNKNOWN |
| 06/19/64 | 1540 | PMR-16 | UNITED STATES | | | Y | | | | | | | | | N/A | UNKNOWN |
| 06/25/64 | 1458 | NASA 14.156 GE | UNITED STATES | WALLOPS ISLAND | | | B | | | | | | | | 150 | DAVIS, T.N. |
| 06/26/64 | 0053 | NASA 14.157 GE | UNITED STATES | WALLOPS ISLAND | | | B | | | | | | | | 156 | DAVIS, T.N. |
| 07/06/64 | 1923 | SKYLARK | UNITED KINGDOM | SARDINIA | | V | | | | | | | | | N/A | UNKNOWN |
| 07/07/64 | 2243 | NB 3.164 | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 295 | BYRAM, E.T. |
| 07/08/64 | 1922 | SKYLARK | UNITED KINGDOM | SARDINIA | | V | | | | | | | | | N/A | UNKNOWN |
| 07/09/64 | 0413 | NASA 14.154 UE | UNITED STATES | WALLOPS ISLAND | C | | | C | | | | | | | 167 | O'BRIEN, B.J. |
| 07/09/64 | 0839 | HAD 141 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | Y<br>A | | | | | | | | | 111 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/11/64 | 0301 | L-03 -01<br>T-003-001 | JAPAN | KAGOSHIMA | | | | C | | | | | | | 1000 | TAKEUCHI,H.<br>IMAI,T.<br>OTSUKA,Y.<br>OYA,K.<br>TSUTSUMI,M.<br>SAITO,H.<br>TOI,A.<br>YOSHINO,H.<br>KIKUCHI,K. |
| 07/11/64 | 0301 | L-03 -<br>T-003-002 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | N/A | FUGONO,N.<br>SHIRO,I.<br>OSHIO,M.<br>OSE,M.<br>HASEGAWA,S.<br>HATSUMI,H. |
| 07/11/64 | 0301 | L-03 -01<br>T-003-003 | JAPAN | KAGOSHIMA | | | | | A | | | | | | 857 | AOYAMA,I.<br>IIZUKA,I. |
| 07/11/64 | 0301 | L-03 -01<br>T-003-005 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 368 | KAMADA,T.<br>YAMAGUCHI,T.<br>TSUCHIYA,T.<br>URIMOTO,S.<br>TANABE,S.<br>OUYAMA,M. |
| 07/13/64 | 0304 | HAD 130 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | Y<br>A | | | | | | | | | 122 | UNKNOWN |
| 07/14/64 | 0300 | HAD 131 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | Y<br>A | | | | | | | | | 122 | UNKNOWN |
| 07/14/64 | 0654 | INCOSPAR 11.01 | INDIA | THUMBA | | A | | | | | | | | | 76 | RAO,M.S.V. |
| 07/15/64 | 0058 | NASA 14.49 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 191 | BEDINGER,J.F. |
| 07/15/64 | 0219 | HAD 133 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | Y<br>A | | | | | | | | | 106 | UNKNOWN |
| 07/15/64 | 0409 | NASA 14.50 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 192 | BEDINGER,J.F. |
| 07/15/64 | 0800 | NASA 14.144 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>D<br>E | | | | | | | | 154 | SMITH,L.G.<br>BOWHILL,S.A.<br>WAGER,J.H. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/15/64 | 0805 | NASA 14.51 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 190 | BEDINGER, J.F. |
| 07/15/64 | 0906 | NASA 14.52 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 191 | BEDINGER, J.F. |
| 07/15/64 | 0920 | NASA 14.145 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>D<br>E | | | | | | | | 161 | SMITH, L.G.<br>BOWHILL, S.A. |
| 07/15/64 | 1025 | NASA 14.146 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>D<br>E | | | | | | | | 171 | SMITH, L.G.<br>BOWHILL, S.A. |
| 07/16/64 | 0213 | HAD 134 | AUSTRALIA<br>UNITED. KINGDOM | WOOMERA | | Y<br>A | | | | | | | | | 106 | UNKNOWN |
| 07/16/64 | 0530 | HAD 136 | AUSTRALIA<br>UNITED KINGDOM | CARNARVON | | Y<br>A | | | | | | | | | 114 | UNKNOWN |
| 07/16/64 | 0910 | INCOSPAR 11.03 | INDIA | THUMBA | | A | | | | | | | | | 76 | RAO, M.S.V. |
| 07/16/64 | 1622 | NASA 14.127 GI | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | C<br>D | N/A | STONE, R.G.<br>ALEXANDER, J.K. |
| 07/17/64 | 0515 | HAD 137 | AUSTRALIA<br>UNITED KINGDOM | CARNARVON | | Y<br>A | | | | | | | | | 120 | UNKNOWN |
| 07/18/64 | 1322 | AC 15.363 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 284 | SILVERMAN, S. |
| 07/23/64 | 1843 | NASA 4.107 GE | UNITED STATES | FORT CHURCHILL | | | | A | | | | | | | 233 | FICHTEL, C.E. |
| 07/25/64 | 1735 | NASA 4.108 GE | UNITED STATES | FORT CHURCHILL | | | | A | | | | | | | 215 | FICHTEL, C.E. |
| 07/26/64 | 1051 | K -C8L-05<br>S -C33 | JAPAN | KAGOSHIMA | | V | | | | | | | | | 112 | SAITO, K.<br>NAKAMURA, J.<br>AKITA, K. |
| 07/28/64 | | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | N/A | FAIRE, A.C. |
| 07/28/64 | 2114 | NASA 6.10 GA | UNITED STATES | FORT CHURCHILL | | C<br>F | C<br>E | | | | | | | | 322 | CARIGNAN, G.R. |
| 07/29/64 | | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | N/A | FAIRE, A.C. |
| 08/00/64 | | ATLAS | UNITED STATES | VANDENBURG AFB | | | | | | | | | | D | N/A | BLOCK, L. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/07/64 | 0016 | NASA 10.138 GA | UNITED STATES | KRONOGARD | | Z | | | | | | | | | 130 | SMITH, W. S.<br>WITT, G. |
| 08/07/64 | 0100 | NASA 10.78 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 119 | SMITH, W. S. |
| 08/08/64 | 0400 | NASA 10.104 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 139 | SMITH, W. S. |
| 08/08/64 | 1000 | | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | N/A | UNKNOWN |
| 08/10/64 | | NIKE-APACHE | UNITED STATES | KRONOGARD | | K | | | | | | | | | N/A | SOBERMAN, R. K. |
| 08/11/64 | 0510 | SL-301 | UNITED KINGDOM | WOOMERA | | | | | | E | | | | | 145 | UNKNOWN |
| 08/11/64 | 1030 | NASA 4.82 GG | UNITED STATES | WHITE SANDS | | E | | | | | | | | | 172 | BOGGESS, A. |
| 08/12/64 | 0043 | NASA 14.56 DA | UNITED STATES | KRONOGARD | | K | | | | | | A | | | 121 | SOBERMAN, R. |
| 08/12/64 | 0111 | NASA 10.139 GA | UNITED STATES | KRONOGARD | | Z | | | | | | | | | N/A | SMITH, W. S.<br>WITT, G. |
| 08/12/64 | 0149 | NASA 10.84 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 114 | SMITH, W. S. |
| 08/12/64 | 0215 | NASA 10.105 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 126 | SMITH, W. S. |
| 08/16/64 | 0053 | NASA 14.57 DA | UNITED STATES | KRONOGARD | | K | | | | | | A | | | 119 | SOBERMAN, R. |
| 08/16/64 | 0113 | NASA 10.140 GA | UNITED STATES | KRONOGARD | | Z | | | | | | | | | 135 | SMITH, W. S.<br>WITT, G. |
| 08/16/64 | 0315 | NASA 10.85 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 122 | SMITH, W. S. |
| 08/16/64 | 0553 | NASA 10.115 GA | UNITED STATES | ASCENSION ISLAND | | Z | | | | | | | | | 123 | THEON, J. S. |
| 08/17/64 | 0029 | NASA 14.58 DA | UNITED STATES | KRONOGARD | | K | | | | | | A | | | 124 | SOBERMAN, R. |
| 08/17/64 | 0049 | SL-302 | UNITED STATES | KRONOGARD | | Z | | | | | | | | | 132 | SMITH, W. S.<br>WITT, G. |
| 08/17/64 | 1255 | NASA 10.116 GA | UNITED STATES | ASCENSION ISLAND | | Z | | | | | | | | | 122 | THEON, J. S. |
| 08/18/64 | 0115 | NASA 10.106 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 124 | SMITH, W. S. |
| 08/18/64 | 0125 | NASA 10.113 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 120 | SMITH, W. S. |
| 08/19/64 | 0601 | INCOSPAR 11.04 | INDIA | THUMBA | | A | | | | | | | | | 78 | RAO, M. S. V |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/19/64 | 1951 | CAJUN-DART | UNITED STATES | EGLIN AFB | | Y A | | | | | | | | | N/A | UNKNOWN |
| 08/20/64 | 0902 | HAD 135 | AUSTRALIA UNITED KINGDOM | WOOMERA | | Y A | | | | | | | | | 119 | UNKNOWN |
| 08/21/64 | 1939 | CAJUN-DART | UNITED STATES | EGLIN AFB | | Y A | | | | | | | | | N/A | UNKNOWN |
| 08/22/64 | 1015 | NASA 4.126 GG | UNITED STATES | WHITE SANDS | | E | | | | | | | | | 123 | BOGGESS, A. |
| 08/24/64 | 1846 | CAJUN-DART | UNITED STATES | EGLIN AFB | | Y A | | | | | | | | | N/A | UNKNOWN |
| 08/26/64 | 1701 | NASA 14.34 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | D | | | | D | 154 | BAUER, S. J.<br>BOURDEAU, R. E. |
| 08/28/64 | | CAJUN-DART | UNITED STATES | EGLIN AFB | | Y A | | | | | | | | | N/A | UNKNOWN |
| 08/29/64 | 0530 | NASA 4.122 CG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 179 | GIACONNI, R. |
| 09/02/64 | 0308 | NASA 4.55 UG | UNITED STATES | WALLOPS ISLAND | | | | | | | D | | | | 156 | CODE, A. D.<br>BLESS, R. C. |
| 09/15/64 | 0935 | AEROBEE 150 | UNITED STATES | WHITE SANDS | | | | | | | B | B | | | 130 | UNKNOWN |
| 09/16/64 | 0758 | ADD -2 -058 | CANADA | FORT CHURCHILL | | | C E | | | | | | | | N/A | UNKNOWN |
| 09/17/64 | 0917 | HAD 144 | AUSTRALIA | WOOMERA | | Y A | | | | | | | | | 99 | UNKNOWN |
| 09/18/64 | 1717 | NASA 4.115 NA | UNITED STATES | WALLOPS ISLAND | E | D | | | | D | | | | | 168 | BARTH, C. A. |
| 09/26/64 | 1204 | NASA 4.13 GP -GT | UNITED STATES | WALLOPS ISLAND | | | | X | | | X C | | | D A | 120 | BUSSE, J. R.<br>DONAHUE, T.<br>RUSSEL, W.<br>FROST, K.<br>HUDGINS, J. |
| 10/00/64 | | ATLAS | UNITED STATES | VANDENBURG AFB | | | | | | | | | | D | N/A | BLOCK, L. |
| 10/02/64 | 0235 | NASA 4.120 CG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 144 | FISHER, P. C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/07/64 | 2304 | NASA 14.195 CA | UNITED STATES | WALLOPS ISLAND | | V | C E | | | | | | | | 172 | SMITH, L.G. BEDINGER, J.F. |
| 10/08/64 | 0532 | NASA 8.03 CA -CI | UNITED STATES | WALLOPS ISLAND | | V | C E | | | | | | | | 1004 | SHARP, G.W. |
| 10/08/64 | 1023 | NASA 14.194 CA | UNITED STATES | WALLOPS ISLAND | | V | C E | | | | | | | | 160 | SMITH, L.G. BEDINGER, J.F. |
| 10/08/64 | 1034 | NASA 14.159 GE | UNITED STATES | WALLOPS ISLAND | | | B | | | | | | | | 141 | DAVIS, T.N. |
| 10/14/64 | 0936 | HAD 146 | AUSTRALIA | WOOMERA | | Y A | | | | | | | | | 102 | UNKNOWN |
| 10/16/64 | | CAJUN-DART | UNITED STATES | EGLIN AFB | | Y A | | | | | | | | | N/A | UNKNOWN |
| 10/17/64 | 0943 | AE 05.487 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 203 | ROSENBERG, N.W. |
| 10/17/64 | 1045 | NA-BLOSSUM | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 10/19/64 | 1542 | NASA 8.24 GI -II | UNITED STATES | WALLOPS ISLAND | | | C E | | | | | | | | 840 | HIRAO, K. |
| 10/21/64 | 1944 | NASA 16.02 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 1950 | SORGNIT, E.F. |
| 10/21/64 | 2112 | HAD 148 | AUSTRALIA | CARNARVON | | Y A | | | | | | | | | N/A | UNKNOWN |
| 10/22/64 | 1103 | HAD 140 | AUSTRALIA | CARNARVON | | Y A | | | | | | | | | N/A | UNKNOWN NKNOWN |
| 10/23/64 | 1600 | NASA 8.33 GR | UNITED STATES | WALLOPS ISLAND | | | | | | | A | | | | 1100 | WEBER, R.R. ALEXANDER, J.K., JR. |
| 10/24/64 | 1733 | SKOL 154-30 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 160 | SMITH, L.B. |
| 10/27/64 | 0058 | NASA 4.123 CG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 192 | GRUSKY, H. WATERS, J. GIACONNI, R. |
| 10/27/64 | 1657 | AC 17.606 | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 203 | ULWICK, J.C. |
| 10/27/64 | 1657 | AB 06.197 | UNITED STATES | FORT CHURCHILL | | | C E | | | | | | | | 136 | ULWICK, J.C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/27/64 | 2025 | SKOL 154-31 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 160 | SMITH, L. B. |
| 10/30/64 | 1930 | NASA 4.116 GS | UNITED STATES | WHITE SANDS | | | C | | | E F | | | | | 189 | MUNEY, W. S. |
| 11/01/64 | 0600 | NASA 14.197 CA | UNITED STATES | FORT CHURCHILL | | V | C E | | | | | | | | 162 | SMITH, L. G.<br>BEDINGER, J. F. |
| 11/01/64 | 0615 | SKOL 154-32 | UNITED STATES | BARKING SANDS | | Y | | | | | | | | | 140 | SMITH, L. B. |
| 11/01/64 | 0618 | SKOL 154-34 | UNITED STATES | BARKING SANDS | | Y | | | | | | | | | 160 | SMITH, L. B. |
| 11/02/64 | 0903 | K -C8L-07<br>S -035 | JAPAN | KAGOSHIMA | | V | | | | | | | | | 156 | HURUHATA, M.<br>NAKAMURA, J.<br>SAITO, K. |
| 11/03/64 | 0757 | NASA 4.52 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | A | 127 | MORTON, D. C. |
| 11/03/64 | 1002 | AE C5.550 | UNITED STATES | EGLIN AFB | | A F | C | | | | | | | | 209 | FAIRE, A. C.<br>SMIDDY, M. |
| 11/03/64 | 1732 | SKOL 154-36 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 160 | SMITH, L. B. |
| 11/04/64 | | JAVELIN | UNITED STATES | WALLOPS ISLAND | | | | | | D | | | | | 867 | FASTIE, W. G. |
| 11/04/64 | 0831 | CE-C78 | ARGENTINA | CHAMICAL | | V | | | | | | | | | 175 | LOPEZ, A. |
| 11/04/64 | 1635 | VERONIQUE | FRANCE | HAMMAGUIR | | | | | | F | | | | | 150 | NATIONAL CENTER FOR SCIENTIFIC RES |
| 11/05/64 | 1700 | NASA 10.107 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 122 | THEON, J. S. |
| 11/05/64 | 1903 | NASA 8.34 UA | UNITED STATES | WALLOPS ISLAND | C | | | | | | | | | | 867 | FASTIE, W. G. |
| 11/05/64 | 2038 | NASA 14.104 DI | UNITED STATES | FORT CHURCHILL | | | | | A | | | | | | 145 | ZANCANATA, H.<br>CONLEY, J. |
| 11/05/64 | 2039 | NASA 8.19 DI | UNITED STATES | FORT CHURCHILL | | | C E | | A | | | | | | 840 | ZANCANTA, H.<br>CONLEY, J.<br>NAGY, A. F. |
| 11/05/64 | 2316 | CE-CEC | ARGENTINA | CHAMICAL | | V | | | | | | | | | 179 | LOPEZ, A. |
| 11/06/64 | 0002 | NASA 10.133 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 120 | THEON, J. S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/06/64 | 0008 | NASA 14.131 IA | UNITED STATES | THUMBA | | V | | | | | | | | | 192 | MEDROW,K.R.<br>SARABHAI,B.A. |
| 11/06/64 | 0520 | NASA 10.134 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 120 | THEON,J.S. |
| 11/06/64 | 0831 | CE-C7S | ARGENTINA | CHAMICAL | | V | | | | | | | | | 176 | LOPEZ,A. |
| 11/06/64 | 1000 | NASA 10.135 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 125 | THEON,J.S. |
| 11/07/64 | 0513 | NASA 14.105 DI | UNITED STATES | FORT CHURCHILL | | | | | A | | | | | | 149 | ZANCANATA,H.<br>CONLEY,J. |
| 11/07/64 | 0514 | NASA 8.20 DI | UNITED STATES | FORT CHURCHILL | | | C<br>E | | A | | | | | | 714 | ZANCANTA,H.<br>CONLEY,J.<br>NAGY,A.F. |
| 11/07/64 | 1031 | NASA 4.109 GG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 213 | STECHER,T.P. |
| 11/09/64 | 1254 | NASA 14.204 IA | UNITED STATES | THUMBA | | V | | | | | | | | | 192 | MEDROW,K.R.<br>SARABHAI,B.A. |
| 11/10/64 | 0005 | NASA 14.205 IA | UNITED STATES | THUMBA | | V | | | | | | | | | 192 | MEDROW,K.R.<br>SARABHAI,B.A. |
| 11/10/64 | 1107 | NASA 14.147 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | E | | | | | 117 | SMITH,L.G.<br>BOWHILL,S.A. |
| 11/10/64 | 2225 | NASA 14.114 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | N/A | BEDINGER,J.F. |
| 11/10/64 | 2228 | NASA 14.53 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 198 | BEDINGER,J.F. |
| 11/11/64 | 0959 | HAD 145 | AUSTRALIA | WOOMERA | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 11/11/64 | 1818 | NASA 4.45 GA | UNITED STATES | WALLOPS ISLAND | | G<br>C<br>F | C<br>E | | | | | | | | 186 | CARIGNAN,G.R. |
| 11/11/64 | 2224 | NASA 14.115 CA | UNITED STATES | 34D 27'N 074D 40'W | | V | | | | | | | | | 156 | BEDINGER,J.F. |
| 11/11/64 | 2227 | NASA 14.112 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 202 | BEDINGER,J.F. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/12/64 | 0205 | K -6L-08<br>S -037 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 145 | AOYAMA,I.<br>MORI,Y.<br>MIYASAKA,S.<br>SABURI,A.<br>TANAKA,H. |
| 11/12/64 | 1000 | HAD 157 | AUSTRALIA | WOOMERA | | Y<br>A | | | | | | | | | 103 | UNKNOWN |
| 11/12/64 | 1053 | NASA 14.116 CA | UNITED STATES | 33D 58'N 076D 16'W | | V | | | | | | | | | 204 | BEDINGER,J.F. |
| 11/12/64 | 1056 | NASA 14.113 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 204 | BEDINGER,J.F. |
| 11/12/64 | 1930 | NE 3.155 | UNITED STATES | WHITE SANDS | | | | | | D<br>C | | | | | 189 | PURCELL,J.D.<br>GARRETT,D.L. |
| 11/14/64 | 1023 | NASA 4.110 GG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 207 | STECHER,T.P. |
| 11/16/64 | 1818 | NASA 4.45 GA | UNITED STATES | WALLOPS ISLAND | | G<br>C | C | | | | | | | | 188 | CARIGNAN,G.R. |
| 11/16/64 | 1831 | NASA 4.118 NA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 157 | POCHARI,T.R.<br>FARLOW,N. |
| 11/17/64 | 1749 | NASA 14.233 UA | UNITED STATES | 37D 45'N 075D 22'W | | | | | | | | | | X | 194 | HANSEN,W.H. |
| 11/17/64 | 2110 | NASA 10.153 GA | UNITED STATES | 37D 43'N 075D 20'W | | | | | | | | | | A | 160 | HANSEN,W.H. |
| 11/18/64 | 1123 | NA-LILA | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/19/64 | 1715 | NE 3.154R | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 219 | AUSTIN,W.E.<br>GARRETT,D.L.<br>SNIDER,C.B. |
| 11/19/64 | 1902 | NASA 10.117 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 125 | SMITH,W.S. |
| 11/19/64 | 2020 | NASA 14.149 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>D<br>E | | | | | | | | 167 | SMITH,L.G.<br>BOWHILL,S.A. |
| 11/19/64 | 2202 | NASA 14.148 UI | UNITED STATES | 37D 84'N 075D 48'W | | | C<br>D<br>E | | | | | | | | 170 | SMITH,L.G.<br>BOWHILL,S.A. |
| 11/22/64 | 1630 | AD 06.811 | UNITED STATES | EGLIN AFB | | | A | | | | | | | | 110 | HARVEY,R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/23/64 | 1707 | NASA 14.117 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | D | | | | D | 178 | DONLEY, J.<br>SPAID, G.<br>BLUMLE, L. |
| 11/25/64 | 1134 | NB 3.161 | UNITED STATES | WHITE SANDS | | | | | | | D<br>F | | | | 165 | BYRAM, E. T. |
| 11/27/64 | 1331 | AE 07.312 | UNITED STATES | EGLIN AFB | | | | | | | | | | A | 201 | HOULT, C. P. |
| 11/27/64 | 1738 | CENTAURE | FRANCE | HAMMAGUIR | | V | | | | | | | | | N/A | UNKNOWN |
| 11/30/64 | 0958 | | UNITED STATES | WHITE SANDS | | | | | | | | | | | 140 | UNKNOWN |
| 11/30/64 | 1311 | NASA 14.135 IA | UNITED STATES | SONMIANI | | V | | | | | | | | | 200 | MEHMUD, S. |
| 11/30/64 | 1737 | | FRANCE | HAMMAGUIR | | V | | | | | | | | | N/A | UNKNOWN |
| 11/30/64 | 1737 | | FRANCE | HAMMAGUIR | | V | | | | | | | | | N/A | UNKNOWN |
| 12/01/64 | 0120 | NASA 14.136 IA | UNITED STATES | SONMIANI | | V | | | | | | | | | 200 | MEHMUD, S. |
| 12/01/64 | 0420 | NASA IONI-64-1 | UNITED STATES | CHAMICAL | | | C<br>E | | | D<br>F | | | | | 134 | RADICELLA, S. |
| 12/01/64 | 0615 | NASA 4.83 GA | UNITED STATES | WHITE SANDS | C | | | | | | | | | | 182 | HENNES, J. P. |
| 12/03/64 | 1740 | | FRANCE | HAMMAGUIR | | V | | | | | | | | | N/A | UNKNOWN |
| 12/04/64 | 0606 | NASA IONI-64-2 | UNITED STATES | CHAMICAL | | | C<br>E | | | D<br>F | | | | | 136 | RADICELLA, S. |
| 12/05/64 | 0655 | INCOSPAR 11.05 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |
| 12/08/64 | 2255 | AD 03.515 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | N/A | HINTEREGGER, H. E. |
| 12/10/64 | 1026 | HAD 161 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | N/A | UNKNOWN |
| 12/11/64 | 1800 | NASA 12.02 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 2 | COLLINS, F. M.<br>SORGNIT, E. F. |
| 12/15/64 | 0630 | INCOSPAR 11.06 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |
| 12/16/64 | 0738 | INCOSPAR 11.07 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/16/64 | 1430 | NASA 4.132 GA -GI | UNITED STATES | WHITE SANDS | | | C | | | | | A | | | 207 | BERG, O.E.<br>WHIPPLE, F.C. |
| 12/16/64 | 1457 | NASA 14.209 GI | UNITED STATES | WHITE SANDS | | | A<br>C<br>B | | | | | | | | 195 | AIKIN, A.C.<br>WHIPPLE, E.C. |
| 12/17/64 | 0305 | SL-302 | UNITED KINGDOM | WOOMERA | | | | | | E | | | | | 167 | UNKNOWN |
| 12/17/64 | 0655 | NASA 4.125 UA | UNITED STATES | WHITE SANDS | C | | | | | | | | | | 235 | FASTIE, W.G.<br>BARTH, C.A. |
| 01/00/65 | | ATLAS | UNITED STATES | VANDENBURG AFB | | | | | | | | | | D | N/A | LOVETT, J. |
| 01/07/65 | 0350 | NASA 14.142 NA | UNITED STATES | WALLOPS ISLAND | C | F<br>Y | | | | | | | | | 146 | POTTER, A.E. |
| 01/12/65 | 1059 | INCOSPAR 11.08 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M.S.V. |
| 01/13/65 | 1015 | INCOSPAR 11.09 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M.S.V. |
| 01/13/65 | 1712 | NASA 8.28 UI | UNITED STATES | WALLOPS ISLAND | | | X | | | | | | | | 1006 | NISBET, J.S.<br>QUINN, T.<br>HALE, L. |
| 01/13/65 | 2348 | NASA 4.111 NA | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | | 178 | BARTH, C.A. |
| 01/21/65 | 2030 | NA 3.163 | UNITED STATES | WHITE SANDS | | | | | | E<br>F | | | | | 235 | MCNUTT, D.P. |
| 01/27/65 | 2132 | NASA 10.124 GA | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | THEON, J.S. |
| 01/27/65 | 2224 | NASA 10.118 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 117 | SMITH, W.S. |
| 01/27/65 | 2224 | NASA 10.121 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 125 | SMITH, W.S |
| 01/31/65 | 0501 | L-C3-02<br>S-C39-001 | JAPAN | KAGOSHIMA | | | B | | | | | | | | 1040 | OTA, T.<br>KUBO, T.<br>OKAWA, K. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/31/65 | 0501 | L -03 -02<br>S -039-002 | JAPAN | KAGOSHIMA | | | D<br>E | | | | | | | | 1040 | OSHIO, M.<br>MIYAZAKI, S.<br>FUGONO, N.<br>OGATA, T.<br>KOIZUMI, T.<br>SEINO, K.<br>SATO, O. |
| 01/31/65 | 0501 | L -03 -02<br>S -039-003 | JAPAN | KAGOSHIMA | | | | C | | | | | | | 1040 | TAKEUCHI, H.<br>IMAI, T.<br>OTSUKA, Y.<br>OYA, K.<br>TSUTSUMI, M.<br>SAITO, H. |
| 01/31/65 | 0501 | L -03 -02<br>S -039-004 | JAPAN | KAGOSHIMA | | | | | | | | | | A | 1040 | AOYAMA, I.<br>SHIMIZU, Y.<br>IIZUKA, I. |
| 01/31/65 | 0501 | L -03 -02<br>S -039-005 | JAPAN | KAGOSHIMA | C | | | | | | | | | | 334 | TOHMATSU, T.<br>YOSHIDA, S.<br>OGAWA, T. |
| 01/31/65 | 0501 | L -03 -02<br>S -039-006 | JAPAN | KAGOSHIMA | | | | | | A | | | | | 334 | YAMAGUCHI, T.<br>URIMOTO, S.<br>OUYAMA, M. |
| 02/03/65 | 0739 | INCOSPAR 11.10 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |
| 02/03/65 | 1808 | NASA 14.61 UE | UNITED STATES | WALLOPS ISLAND | | | C<br>A | B | | A | | | | | 141 | LOCKWOOD, J. A.<br>HOUSTON, R. E.<br>CHUPP, E. L. |
| 02/04/65 | 0510 | NASA 10.119 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 118 | SMITH, W. S. |
| 02/04/65 | 1734 | NASA 10.122 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 02/06/65 | 0501 | K -09M-07<br>S -040-002 | JAPAN | KAGOSHIMA | D | | C<br>E | | | | | | | | 325 | OSHIO, M.<br>MIYAZAKI, S.<br>FUGONO, N.<br>OGATA, T.<br>KOIZUMI, T.<br>SEINO, K.<br>SATO, O. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/06/65 | 0501 | K -CSM-07<br>S -C40-003 | JAPAN | KAGOSHIMA | | | B | | | | | | | | N/A | AOYAMA, I.<br>SHIMIZU, Y.<br>IIZUKA, I. |
| 02/06/65 | 0501 | K -CSM-07<br>S -C40-001 | JAPAN | KAGOSHIMA | C | | | | | | | | | | 325 | TOHMATSU, T.<br>OGAWA, T. |
| 02/06/65 | 1002 | K -CSM-06<br>S -C41-001 | JAPAN | KAGOSHIMA | | | | | | A | | | | | 335 | TOKUDA, S.<br>TSUCHIYA, T.<br>URIMOTO, S.<br>OUYAMA, M. |
| 02/06/65 | 1002 | K -CSM-06<br>S -C41-002 | JAPAN | KAGOSHIMA | | | | | | A | | | | | 335 | TSUCHIYA, A.<br>NAGANE, K.<br>URIMOTO, S.<br>TANABE, S. |
| 02/06/65 | 1002 | K -CSM-06<br>S -C41-003 | JAPAN | KAGOSHIMA | | | | | | A | | | | | 335 | YAMAGUCHI, T.<br>URIMOTO, S.<br>OUYAMA, M. |
| 02/08/65 | 0445 | NASA 10.125 GA | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 121 | THEON, J. S. |
| 02/08/65 | 2215 | NASA 10.126 GA | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 124 | THEON, J. S. |
| 02/08/65 | 2253 | NASA 10.120 GA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 107 | SMITH, W. S. |
| 02/08/65 | 2260 | NASA 10.123 GA | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 125 | SMITH, W. S. |
| 02/11/65 | 1755 | AE 03.153 | UNITED STATES | WHITE SANDS | | | | | | D<br>E | | | | | 200 | JURSA, A. |
| 02/17/65 | 1904 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 02/18/65 | | NIKE-APACHE | UNITED STATES | EGLIN AFB | | Z | | | | | | | | | N/A | ROSENBERG, N. W. |
| 02/18/65 | 2009 | NASA 14.11 UA | UNITED STATES | FORT CHURCHILL | | | D<br>C | | | | | | | | N/A | SCHAEFER, E. J. |
| 02/19/65 | 0025 | AE 05.492 | UNITED STATES | EGLIN AFB | | Z<br>V | | | | | | | | | 161 | ROSENBERG, N. W. |
| 02/19/65 | 0451 | NASA 4.129 UA | UNITED STATES | FORT CHURCHILL | | | | | | | D<br>E | | | | 159 | FASTIE, W. G.<br>BARTH, C. A |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/19/65 | 0917 | NASA 14.95 UA | UNITED STATES | FORT CHURCHILL | | | D C | | | | | | | | 187 | SCHAEFER,E. J. |
| 02/23/65 | | JAVELIN 3 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | N/A | FAIRE,A.C. |
| 02/23/65 | 1715 | NIKE-JAVELIN | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 200 | UNKNOWN |
| 02/24/65 | 1508 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 02/26/65 | | NIKE-APACHE | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | N/A | FAIRE,A.C. |
| 02/26/65 | 1210 | NIKE-APACHE | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 150 | UNKNOWN |
| 02/26/65 | 1830 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 02/27/65 | | | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | N/A | BEDINGER,J.F. |
| 02/27/65 | 2100 | AE 05.556 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 157 | FAIRE,A.C. |
| 02/27/65 | 2133 | NASA 10.155 UA | UNITED STATES | 37D 47'N 079D 23'W | | Y | | | | | | | | | N/A | HANSEN,W.H. |
| 02/27/65 | 2230 | AE 05.486 | UNITED STATES | EGLIN AFB | | | C E | | | | | | | | 132 | ULWICK,J.C. |
| 02/28/65 | 0021 | NASA 14.196 CA | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 170 | SMITH,L.G.<br>BEDINGER,J.F. |
| 02/28/65 | 0415 | AE 05.494 | UNITED STATES | EGLIN AFB | | Z V | | | | | | | | | 145 | ROSENBERG,N.W. |
| 02/28/65 | 0915 | AE 05.553 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 143 | ULWICK,J.C. |
| 02/28/65 | 0915 | AE 05.496 | UNITED STATES | EGLIN AFB | | Z V | | | | | | | | | N/A | ROSENBERG,N.W. |
| 02/28/65 | 1130 | AE 05.497 | UNITED STATES | EGLIN AFB | | Z V | | | | | | | | | 139 | ROSENBERG,N.W. |
| 02/29/65 | 0030 | NIKE APACHE | UNITED STATES | EGLIN AFB | | | C E | | | | | | | | N/A | UNKNOWN |
| 03/00/65 | | ATLAS | UNITED STATES | VANDENBURG AFB | | | | | | | | | | D | N/A | BLOCK,L. |
| 03/01/65 | 1312 | BOOSTER ARCAS | UNITED STATES | ANDOYA | | | X | | | | | | | | 95 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/02/65 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | E | | | | N/A | HINTEREGGER, H.E. |
| 03/02/65 | 0957 | HAD 152 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 123 | UNKNOWN |
| 03/02/65 | 2009 | | SWEDEN | ANDOYA | | | C B | | | | | | | | 95 | UNKNOWN |
| 03/02/65 | 2009 | | UNITED STATES | ANDOYA | | | X | | | | | | | | 90 | UNKNOWN |
| 03/03/65 | 0009 | AE 3.516 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 241 | HINTEREGGER, H.E. |
| 03/03/65 | 1415 | AE 03.517 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 252 | HINTEREGGER, H.E. |
| 03/04/65 | | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | E | | | | N/A | HINTEREGGER, H.E. |
| 03/05/65 | | | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 03/05/65 | 0011 | AE 3.518 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 245 | HINTEREGGER, H.E. |
| 03/06/65 | 0341 | NASA 4.133 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 189 | MORTON, D.C. |
| 03/06/65 | 0732 | AE 03.613 | UNITED STATES | FORT CHURCHILL | S | | | | | | | | | | 193 | ULWICK, J.C. |
| 03/08/65 | 1535 | NASA 14.160 GE | UNITED STATES | 00D 01'N 084D 19'W | | | | | X | | | | | | N/A | DAVIS, T.N. HEPPNER, J.P. |
| 03/08/65 | 1635 | FL-14.160 | | 00D 12'N 084D 18'W | | | B | | | | | | | | 152 | UNKNOWN |
| 03/08/65 | 1748 | NASA 14.64 UA | UNITED STATES | 00D 00'N 084D 08'W | | B C F | | | | | | | | | N/A | HORVATH, J.J. |
| 03/09/65 | 0626 | NASA 14.65 UA | UNITED STATES | 00D 52'S 084D 09'W | | B C F | | | | | | | | | N/A | HORVATH, J.J. |
| 03/09/65 | 1625 | NASA 14.85 UE | UNITED STATES | 03D 07'S 084D 22'W | | | B | | | | | | | | N/A | CAHILL, L.J. |
| 03/10/65 | 1600 | NASA 14.83 UE | UNITED STATES | 06D 30'S 084D 32'W | | | B | | | | | | | | N/A | CAHILL, L.J. |
| 03/10/65 | 1942 | | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/11/65 | 0207 | MT-135-05 T-011 | JAPAN | KAGOSHIMA | | A C | | | | | | | | | 60 | ARIZUMI, N. SUZUKI, S. KOBANE, S. |
| 03/11/65 | 0707 | MT-135-06 T-012 | JAPAN | KAGOSHIMA | | A C | | | | | | | | | 60 | ARIZUMI, N. SUZUKI, S. KOBANE, S. |
| 03/11/65 | 0935 | NASA 14.98 UA | UNITED STATES | 09D 27'S 082D 26'W | | G B C F | | | | | | | | | N/A | SCHAEFER, E. J. |
| 03/11/65 | 1038 | NASA 10.156 UA | UNITED STATES | 09D 36'S 082D 21'W | | Y | | | | | | | | | N/A | HANSEN, W. H. |
| 03/11/65 | 2007 | NASA 14.99 UA | UNITED STATES | 09D 32'S 084D 14'W | | G F | | | | | | | | | N/A | SCHAEFER, E. J. |
| 03/12/65 | 1330 | NASA 14.07 UE | UNITED STATES | 11D 23'S 081D 25'W | | G | B | | | | | | | | N/A | CAHILL, L. J. |
| 03/12/65 | 1600 | NASA 14.84 UE | UNITED STATES | 11D 23'S 081D 20'W | | G | B | | | | | | | | N/A | CAHILL, L. J. |
| 03/13/65 | 0355 | AE 03.516 | UNITED STATES | WHITE SANDS | | | | | | | X | | | | 105 | BOGGESS, A. SCOLNIK, R. |
| 03/13/65 | 0742 | AD 03.612 | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 184 | ULWICK, J. C. |
| 03/15/65 | 0620 | AE 03.518 | UNITED STATES | ANDOYA | | | C | | | | | | | | 77 | KANE, J. A. |
| 03/16/65 | 1615 | NASA 14.171 GE | UNITED STATES | 12D 47'S 078D 03'W | | | | | A | | | | | | N/A | DAVIS, T. N. HEPPNER, J. P. |
| 03/16/65 | 1651 | NASA 14.177 GI | UNITED STATES | 12D 49'S 078D 15'W | | | C A | | | | | | | | N/A | AIKIN, A. C. BLUMLE, L. J. |
| 03/17/65 | 0655 | INCOSPAR 11.11 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |
| 03/17/65 | 1510 | NASA 4.63 GS | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 156 | MUNEY, W. S. |
| 03/17/65 | 1710 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 03/17/65 | 2113 | AE -2 -024 | CANADA UNITED STATES | FORT CHURCHILL | | Y | | | | | | | | | 153 | GRENDA, R. H. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/18/65 | 0604 | NASA 14.172 GE | UNITED STATES | 12D 47'S 077D 58'W | | | B | | | | | | | | N/A | DAVIS,T.N.<br>HEPPNER,J.P. |
| 03/18/65 | 0641 | NASA 14.178 GI | UNITED STATES | 12D 48'S 077D 56'W | | | C<br>A | | | | | | | | N/A | AIKIN,A.C.<br>BLUMLE,L.J. |
| 03/18/65 | 1007 | L -03 -03<br>S -042-001 | JAPAN | KAGOSHIMA | | | | C | | | | | | | 1100 | TAKEUCHI,H.<br>IMAI,T.<br>OTSUKA,Y.<br>TSUTSUMI,M.<br>NAKAMURA,H.<br>MATSUSHIMA,K. |
| 03/18/65 | 1007 | L -03 -03<br>S -042-002 | JAPAN | KAGOSHIMA | | | | C | | | | | | | 1100 | TSUKUDA,M.<br>DOKE,T.<br>SASAKI,A. |
| 03/18/65 | 1007 | L -03 -03<br>S -042-003 | JAPAN | KAGOSHIMA | | | | A | | | | | | | 1100 | MATSUOKA,M.<br>YAMASHITA,K. |
| 03/18/65 | 1007 | L -03 -03<br>S -042-004 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 1100 | SHIRO,I.<br>OSHIO,M.<br>MIYAZAKI,S.<br>OHSE,M.<br>SUGIUCHI,H.<br>HATSUMI,H.<br>SATO,O. |
| 03/18/65 | 1601 | NASA 14.176 GE | UNITED STATES | 12D 47'S 078D 00'W | | | B | | | | | | | | N/A | DAVIS,T.N.<br>HEPPNER,J.P. |
| 03/18/65 | 1638 | NASA 14.179 GI | UNITED STATES | 12D 47'S 077D 59'W | | | C<br>A | | | | | | | | N/A | AIKIN,A.C.<br>BLUMLE,L.J. |
| 03/18/65 | 2043 | NASA 14.62 UA | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | | 158 | FLOWERDAY,T.W. |
| 03/19/65 | 0300 | NASA 4.57 GG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 155 | BOGGESS,A.<br>SCOLNIK,R. |
| 03/19/65 | 0624 | ADD -2 -052 | CANADA<br>UNITED STATES | FORT CHURCHILL | | | C<br>D | | B | | | | | | 168 | SHEPARD,G.G.<br>FORSYTH,P.A.<br>MCNAMARA,A.G.<br>WLOCHOWICZ,R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/19/65 | 1809 | NASA 18.01 GA | UNITED STATES | WALLOPS ISLAND | | | C E | | | | | | | | 325 | CARIGNAN,G.R. |
| 03/19/65 | 1809 | NASA 12.05 GA | UNITED STATES | WALLOPS ISLAND | | F | C E | | | | | | | | 315 | CARIGNAN,G.R. |
| 03/20/65 | 0542 | NASA 6.11 GA | UNITED STATES | WALLOPS ISLAND | | C F | C E | | | | | | | | 326 | CARIGNAN,G.R. |
| 03/20/65 | 1320 | NASA 14.228 UI | UNITED STATES | 12D 00'S 078D 00'W | | | D C | | | | | | | | N/A | BOWHILL,S.A.<br>SMITH,L.G. |
| 03/20/65 | 1628 | AE 05.293 | UNITED STATES | 12D 55'S 000D 78'W | | | B | | | | | | | | 201 | SHUMAN,B. |
| 03/20/65 | 1704 | AE 06.252 | UNITED STATES | 12D 57'S 077D 58'W | | | B | | | | | | | | 122 | SMIDDY,M. |
| 03/21/65 | 0645 | NASA 15.02 GI | UNITED STATES | ANDOYA | | | C | B | | | | | | | 76 | KANE,J.A. |
| 03/22/65 | 0744 | AE 05.294 | UNITED STATES | 12D 54'S 077D 54'W | | | B | | | | | | | | 206 | SHUMAN,B. |
| 03/22/65 | 0859 | AE 06.253 | UNITED STATES | 12D 57'S 077D 50'W | | | B | | | | | | | | 120 | SMIDDY,M. |
| 03/24/65 | 0640 | AA -2 -053 | CANADA | FORT CHURCHILL | | G | C | | B | | | | | | 166 | FORSYTH,P.<br>KAVADAS,A.<br>WILSON,B.<br>ANGER,C. |
| 03/24/65 | 1624 | FL-14.174 | | 11D 44'S 078D 36'W | | | B | | | | | | | | 161 | UNKNOWN |
| 03/24/65 | 1634 | NASA 14.174 GE | UNITED STATES | 11D 24'S 078D 25'W | | | C A | | | | | | | | N/A | AIKIN,A.C.<br>BLUMLE,L.J. |
| 03/24/65 | 1707 | NASA 14.180 GI | UNITED STATES | 11D 24'S 078D 25'W | | | C A | | | | | | | | N/A | AIKIN,A.C.<br>BLUMLE,L.J. |
| 03/24/65 | 1745 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 03/25/65 | 0006 | SL-141 | UNITED KINGDOM | WOOMERA | | | C | | | | C | | | | 174 | UNKNOWN |
| 03/25/65 | 0534 | AA -2 -060 | CANADA | FORT CHURCHILL | | | C | | | | | | | | 155 | WILSON,B.G.<br>ANGER,C.<br>MODIARMID,I.B.<br>KAVADIS,A.<br>WLOCHOWICZ,R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/25/65 | 1121 | K -CSM-08<br>S -C43 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 320 | SHIRO,I.<br>OSHIO,M.<br>MIYAZAKI,S.<br>OHSE,M.<br>SUGIUCHI,H.<br>HATSUMI,H.<br>SATO,O. |
| 03/25/65 | 1121 | K -CSM-08<br>S -C43-002 | JAPAN | KAGOSHIMA | C | | | | | | | | | | N/A | TANABE,H.<br>NAKAMURA,T.<br>URIMOTO,S. |
| 03/25/65 | 1600 | AE 05.295 | UNITED STATES | 09D 10'S 000D 80'W | | | B | | | | | | | | 100 | SHUMAN,B. |
| 03/26/65 | 1541 | NASA 14.173 GE | UNITED STATES | 10D 10'S 079D 30'W | | | X | | | | | | | | N/A | DAVIS,T.N.<br>HEPPNER,J.P. |
| 03/26/65 | 1541 | FL-14.173 | | 10D 12'S 079D 30'W | | | B | | | | | | | | 155 | UNKNOWN |
| 03/26/65 | 1613 | NASA 14.181 GI | UNITED STATES | 10D 10'S 079D 27'W | | | C | | | | | | | | N/A | AIKIN,A.C.<br>BLUMLE,L.J. |
| 03/27/65 | 0300 | NASA 14.182 GI | UNITED STATES | 12D 11'S 078D 45'W | | | A<br>C | | | | | | | | N/A | AIKIN,A.C.<br>BLUMLE,L.J. |
| 03/27/65 | 0501 | K -CSM-09<br>S -C44-001 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 335 | SHIRO,I.<br>OSHIO,M.<br>MIYAZAKI,S.<br>OHSE,M.<br>SUGIVCHI,H.<br>HATSUMI,H.<br>SATO,O. |
| 03/27/65 | 0501 | K -CSM-09<br>S -C44-002 | JAPAN | KAGOSHIMA | C | | | | | | | | | | 335 | TOHMATSU,T.<br>OGAWA,T. |
| 03/27/65 | 1608 | FL-14.175 | | 14D 12'S 077D 57'W | | | B | | | | | | | | 152 | UNKNOWN |
| 03/27/65 | 1808 | NASA 14.175 GE | UNITED STATES | 14D 10'S 077D 57'W | | | | | A | | | | | | N/A | DAVIS,T.N.<br>HEPPNER,J.P. |
| 03/28/65 | 0701 | K -CSM-10<br>S -C45-001 | JAPAN | KAGOSHIMA | | | | C | | | | | | | 349 | YABUZAKI,T.<br>NAKADAN,K.<br>OKAWA,K. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/28/65 | 1550 | AE 05.296 | UNITED STATES | 15D 59'S 077D 59'W | | | B | | | | | | | | 129 | SHUMAN,B. |
| 03/29/65 | 1547 | NASA 10.143 GE | UNITED STATES | 12D 05'S 078D 14'W | | | B | | X | | | | | | N/A | DAVIS,T.N.<br>HEPPNER,J.P. |
| 03/29/65 | 1547 | NASA 14.70 GE | UNITED STATES | 12D 05'S 078D 14'W | | | B | | X | | | | | | N/A | DAVIS,T.N.<br>HEPPNER,J.P. |
| 03/30/65 | | BLUE SCOUT JR. | UNITED STATES | CAPE KENNEDY | | | | | X | | | | | | 16500 | UNKNOWN |
| 03/30/65 | 0550 | ND 3.159 | UNITED STATES | WHITE SANDS | C | | | | | | D | | | | 217 | PACKER,D.M.<br>GULLEDGE,I.S. |
| 03/30/65 | 0900 | HAD 153 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 112 | UNKNOWN |
| 03/31/65 | 1701 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 04/01/65 | 0207 | NASA 14.132 NA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 139 | POTTER,A.E. |
| 04/02/65 | 1322 | NASA 14.185 UE | UNITED STATES | 12D 07'S 078D 13'W | | F | C | | | F<br>E | | | | | N/A | HOUSTON,R.E.<br>LOCKWOOD,J.A. |
| 04/03/65 | 0638 | NASA 14.207 UE | UNITED STATES | FORT CHURCHILL | B | | | X | | | | | | | 205 | O'BRIEN,B.J. |
| 04/03/65 | 1254 | ESRO | FRANCE | SARDINIA | | | C<br>E | | | | | | | | 155 | RAWER,K.<br>JACOBS,K.G.<br>KAISER,P.<br>WILLMORE,A.P.<br>NORMAN,K. |
| 04/04/65 | 1606 | NASA 14.66 UA | UNITED STATES | 24D 05'S 076D 08'W | | C<br>B<br>F | | | | | | | | | N/A | HORVATH,J.J. |
| 04/05/65 | 1345 | NASA 14.230 UI | UNITED STATES | 29D 34'S 075D 13'W | | C | C | | | | E | | | | N/A | BOWHILL,S.A.<br>SMITH,L.G. |
| 04/05/65 | 1942 | NASA 14.184 UE | UNITED STATES | 30D 38'S 075D 02'W | | | C | | | E<br>F | | | | | N/A | HOUSTON,R.E.<br>LOCKWOOD,J.A. |
| 04/06/65 | 1634 | NASA 14.26 UA | UNITED STATES | 35D 14'S 074D 15'W | | C<br>B<br>F | | | | | | | | | N/A | HORVATH,J.J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/07/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 04/09/65 | 0101 | SL-3C3 | UNITED KINGDOM | WOOMERA | | | | | | E F | | | | | 160 | UNKNOWN |
| 04/09/65 | 1918 | NASA 14.231 UI | UNITED STATES | 44D 15'S 075D 40'W | | | D E | | | E | | | | | N/A | BOWHILL, S. A.<br>SMITH, L. G. |
| 04/09/65 | 2026 | NASA 14.63 UA | UNITED STATES | 44D 23'S 077D 47'W | | B C E | | | | | | | | | N/A | HORVATH, J. J. |
| 04/12/65 | 1447 | NASA 4.49 GS | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 200 | FREDGA, K. |
| 04/12/65 | 1714 | NASA 14.232 UI | UNITED STATES | 58D 19'S 078D 00'W | | | C E | | | E | | | | | N/A | BOWHILL, S. A.<br>SMITH, L. G. |
| 04/12/65 | 1937 | AE 07.313 | UNITED STATES | EGLIN AFB | | | | | | | | | | B | 143 | HOULT, C. P. |
| 04/13/65 | 0405 | NASA 14.67 UA | UNITED STATES | 60D 00'S 078D 00'W | | B C F | | | | | | | | | N/A | HORVATH, J. J. |
| 04/13/65 | 1600 | NASA 14.27 UA | UNITED STATES | 60D 00'S 078D 00'W | | | C E | | | E | | | | | N/A | HORVATH, J. J. |
| 04/13/65 | 1710 | NASA 14.186 UE | UNITED STATES | 60D 00'S 078D 00'W | | | C | | | E F | | | | | N/A | LOCKWOOD, J. A.<br>HOUSTON, R. E. |
| 04/14/65 | 1439 | NASA 11.07 UE | UNITED STATES | WALLOPS ISLAND | | | | X | | | | | | | 1660 | WINKLER, J. R.<br>PFITZER, K.<br>MANZANO, J. R. |
| 04/14/65 | 1744 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 04/15/65 | 1045 | NASA 4.127 UA | UNITED STATES | WHITE SANDS | | G C | | | | | | | | | 198 | NIER, A. O. C. |
| 04/15/65 | 1600 | NASA 14.25 UA | UNITED STATES | 52D 35'S 078D 20'W | | C F B | | | | | | | | | N/A | HORVATH, J. J. |
| 04/17/65 | 0515 | NASA 4.114 GG | UNITED STATES | WHITE SANDS | | | | | | | X | | | | 82 | SCOLNIK, R.<br>BOGGESS, A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/17/65 | 1700 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 04/20/65 | 1540 | NE 3.156 | UNITED STATES | WHITE SANDS | | | | | | E<br>F<br>D | | | | | 201 | AUSTIN,W.E.<br>GARRETT,D.L.<br>SNIDER,C.B. |
| 04/20/65 | 2204 | AD 06.841 | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | U | 80 | ELLIS,C.E. |
| 04/21/65 | 1715 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 04/22/65 | 0514 | AA -3 -011 | CANADA | FORT CHURCHILL | B | | C | | | | | | | | 136 | BUDZINSKI,E.E.<br>MCDIARMID,I.B.<br>MCNAMARA,A.G. |
| 04/23/65 | 0301 | NASA 10.171 NA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 128 | HORD,R.A.<br>TOLEFSON,H.B. |
| 04/23/65 | 0402 | NASA 14.255 NA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 145 | HORD,R.A.<br>TOLEFSON,H.B. |
| 04/28/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 04/28/65 | 2357 | INCOSPAR 15.02 | INDIA | THUMBA | | V | C | | | | | | | | 150 | |
| 04/29/65 | 1109 | SL-363 | UNITED KINGDOM | WOOMERA | | V<br>Z | | | | | | | | | 136 | UNKNOWN |
| 04/29/65 | 1225 | SL-364 | UNITED KINGDOM | WOOMERA | | Z | | | | | | | | | 132 | UNKNOWN |
| 04/29/65 | 1426 | SL-461 | AUSTRALIA | WOOMERA | | Z | | | | | | | | | 124 | UNKNOWN |
| 04/29/65 | 1732 | NASA 10.94 IA | UNITED STATES | SONMIANI | | Z | | | | | | | | | N/A | WITT,W.R. |
| 04/30/65 | 1606 | SL-462 | UNITED KINGDOM | WOOMERA | | Z | | | | | | | | | 140 | UNKNOWN |
| 04/30/65 | 1706 | SL-463 | AUSTRALIA | WOOMERA | | Z | | | | | | | | | 135 | UNKNOWN |
| 05/00/65 | | ATLAS | UNITED STATES | VANDENBURG AFB | | | | | | | | | | D | N/A | LOVETT,J. |
| 05/05/65 | 0323 | NASA 4.89 GG | UNITED STATES | WALLOPS ISLAND | | | | | | | C<br>D<br>E | | | | 145 | WRIGHT,D.U.<br>BOGGESS,A. |
| 05/10/65 | 0600 | HAD 165 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 115 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/10/65 | 0850 | HAD 164 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 116 | UNKNOWN |
| 05/10/65 | 1150 | HAD 162 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 116 | UNKNOWN |
| 05/10/65 | 1450 | HAD 158 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 109 | UNKNOWN |
| 05/10/65 | 1750 | HAD 170 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 115 | UNKNOWN |
| 05/10/65 | 2315 | HAD 154 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 111 | UNKNOWN |
| 05/11/65 | 0140 | HAD 155 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 113 | UNKNOWN |
| 05/11/65 | 0839 | HAD 160 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 114 | UNKNOWN |
| 05/11/65 | 2040 | SL-361 | UNITED KINGDOM | WOOMERA | | V Y | | | | | | | | | 181 | UNKNOWN |
| 05/12/65 | | SCOUT, JR. | UNITED STATES | CAPE KENNEDY | | | | C | | | | | | | N/A | KATZ, L. |
| 05/12/65 | 1900 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 05/14/65 | 1605 | SL-139 | UNITED KINGDOM | WOOMERA | | | C | | | | | | | | 187 | UNKNOWN |
| 05/19/65 | 0525 | SL-138 | UNITED KINGDOM | WOOMERA | | | C | | | F | | | | | 179 | UNKNOWN |
| 05/19/65 | 0704 | INCOSPAR 11.12 | INDIA | THUMBA | | A | | | | | | | | | 77 | SIKDAR, D. N. |
| 05/19/65 | 2011 | NASA 8.29 UI | UNITED STATES | WALLOPS ISLAND | | | C A D E | | | | | | | | 947 | NISBET, J. S. KING, O. |
| 05/22/65 | 0110 | NASA 10.130 DA | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 52 | ROSENBERG, N. W. |
| 05/22/65 | 0202 | NASA 14.47 UA | UNITED STATES | ASCENSION ISLAND | | B C F | | | | | | | | | 158 | HORVATH, J. J. |
| 05/22/65 | 1400 | NASA 14.48 UA | UNITED STATES | ASCENSION ISLAND | | B C F | | | | | | | | | 158 | HORVATH, J. J. |
| 05/25/65 | | | AUSTRALIA | WOOMERA | | V | | | | | | | | | 110 | COOK, C. L. DRUMMOND, L. J. SHEPPARD, L. M. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/25/65 | 1959 | NASA 15.18 GI | UNITED STATES | CAPE KARIKARI | | | | | | | | | | C | 88 | AIKIN,A.C.<br>KANE,J.A. |
| 05/25/65 | 2320 | AD 13.815 | UNITED STATES | EGLIN AFB | | | A | | | | | | | | 488 | HARVEY,R. |
| 05/26/65 | 2320 | AD 13.812 | UNITED STATES | EGLIN AFB | | | A | | | | | | | | 488 | HARVEY,R. |
| 05/30/65 | 1900 | NASA 15.05 GI | UNITED STATES | CAPE KARIKARI | | | C | | | A | | | | | 88 | AIKIN,A.C.<br>KANE,J.A. |
| 05/30/65 | 1920 | NASA 15.06 GI | UNITED STATES | CAPE KARIKARI | | | C | | | A | | | | | 88 | AIKIN,A.C.<br>KANE,J.A. |
| 05/30/65 | 1940 | NASA 15.07 GI | UNITED STATES | CAPE KARIKARI | | | C | | | A | | | | | 88 | AIKIN,A.C.<br>KANE,J.A. |
| 05/30/65 | 2000 | NASA 15.08 GI | UNITED STATES | CAPE KARIKARI | | | C | | | A | | | | | 88 | AIKIN,A.C.<br>KANE,J.A. |
| 05/30/65 | 2020 | NASA 15.09 GI | UNITED STATES | CAPE KARIKARI | | | C | | | A | | | | | 88 | AIKIN,A.C.<br>KANE,J.A. |
| 05/30/65 | 2100 | NASA 15.10 GI | UNITED STATES | CAPE KARIKARI | | | C | | | A | | | | | 88 | AIKIN,A.C.<br>KANE,J.A. |
| 06/02/65 | 1020 | AD 06.850 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 121 | ROSENBERG,N.W. |
| 06/02/65 | 1030 | AE 06.498 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 121 | ROSENBERG,N.W. |
| 06/02/65 | 1700 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 06/06/65 | 1745 | DASA 0C6.4 | UNITED STATES | EGLIN AFB | | | C | | | | | | | | N/A | UNKNOWN |
| 06/08/65 | 0831 | HAD 172 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 106 | UNKNOWN |
| 06/09/65 | 0832 | HAD 171 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 115 | UNKNOWN |
| 06/11/65 | 1700 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | V | | | | | | | | | N/A | UNKNOWN |
| 06/14/65 | 0913 | NASA 14.245 UI | UNITED STATES | WALLOPS ISLAND | | | A<br>C | | | E | | | | | 177 | SMITH,L.G.<br>BOWHILL,S.A. |
| 06/16/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 2 3 4 5 6 7 8 9 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|
| 06/16/65 | 0704 | INCOSPAR 11.13 | INDIA | THUMBA | A | 77 | SIKDAR, D. N. |
| 06/16/65 | 1800 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | V | N/A | UNKNOWN |
| 06/17/65 | 2107 | NASA 4.140 GE | UNITED STATES | FORT CHURCHILL | A | 233 | FICHTEL, C. E.<br>GUSS, D. E.<br>REAMES, D. V. |
| 06/17/65 | 2141 | NASA 14.246 UI | UNITED STATES | WALLOPS ISLAND | A C E | 177 | SMITH, L. G.<br>BOWHILL, S. A. |
| 06/18/65 | 1756 | NASA 14.215 AI | UNITED STATES | WALLOPS ISLAND | X | 186 | HUGILL, J.<br>DUNHAM, W. L. |
| 06/18/65 | 2311 | NASA 17.01 GT | UNITED STATES | WALLOPS ISLAND | A | 374 | LANE, J. H. |
| 06/23/65 | 0103 | NASA 14.72 CM | UNITED STATES | WALLOPS ISLAND | V | 191 | BEDINGER, J. F. |
| 06/23/65 | 0159 | NASA 14.71 CM | UNITED STATES | WALLOPS ISLAND | V | 204 | BEDINGER, J. F. |
| 06/23/65 | 0400 | NASA 14.201 CA | UNITED STATES | WALLOPS ISLAND | X | 164 | SMITH, L. G.<br>BEDINGER, J. F. |
| 06/23/65 | 0847 | NASA 14.73 CM | UNITED STATES | WALLOPS ISLAND | V | 196 | BEDINGER, J. F. |
| 06/23/65 | 0852 | NASA 14.74 CM | UNITED STATES | WALLOPS ISLAND | V | 143 | BEDINGER, J. F. |
| 06/23/65 | 1547 | NASA 4.141 GE | UNITED STATES | FORT CHURCHILL | A | 215 | FICHTEL, C. E.<br>GUSS, D. E.<br>REAMES, D. V. |
| 06/23/65 | 1725 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | V | N/A | UNKNOWN |
| 06/29/65 | | NIKE-JAVELIN-3 | UNITED STATES | EGLIN AFB | G | N/A | NARCISI, R. S. |
| 06/29/65 | 1900 | NASA 4.112 NA | UNITED STATES | WHITE SANDS | G D | 195 | BARTH, C. A.<br>PEARCE, J. B. |
| 06/30/65 | 0533 | NASA 11.03 UR | UNITED STATES | WALLOPS ISLAND | C A | 1770 | LINDSAY, W. J. |
| 06/30/65 | 1430 | NASA 4.105 NP | UNITED STATES | WHITE SANDS | B | 158 | BARATH, F. T. |
| 06/30/65 | 1503 | CAJUN-DART | UNITED STATES | CAPE KENNEDY | V | N/A | UNKNOWN |
| 07/01/65 | 0145 | SL-106 | UNITED KINGDOM | WOOMERA | E F A | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/07/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 07/07/65 | 0825 | AE 03.117 | UNITED STATES | FORT CHURCHILL | | K | | | | | | | | | 166 | SOBERMAN, R. K. |
| 07/07/65 | 0837 | HAD 174 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 105 | UNKNOWN |
| 07/08/65 | 0226 | MT-135-07<br>T-C14 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 50 | ARIZUMI, N.<br>SUZUKI, S.<br>KOBANE, S. |
| 07/14/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 07/14/65 | 1108 | SL-C48 | UNITED KINGDOM | WOOMERA | | | | | | D | | | | | 183 | UNKNOWN |
| 07/15/65 | 2050 | NASA 4.128 UA | UNITED STATES | WHITE SANDS | | G<br>C | | | | | | | | | 196 | NIER, A. O. C. |
| 07/16/65 | 1050 | K-C8-12<br>S-C46-001 | JAPAN | KAGOSHIMA | | V | | | | | | | | | 160 | NAKAMURA, J.<br>AKITA, K.<br>SAITO, K. |
| 07/16/65 | 1050 | K-C8-12<br>S-C46-002 | JAPAN | KAGOSHIMA | | V | | | | | | | | | 160 | SHIRO, I.<br>OSHIO, M.<br>FUGONO, N.<br>OGATA, T.<br>NAGAYAMA, M.<br>MI, H.<br>MIMURA, H. |
| 07/21/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 07/21/65 | 0250 | INCOSPAR JD-14 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |
| 07/21/65 | 1033 | AE 07.347 | UNITED STATES | EGLIN AFB | | F | | | | | | | | A | 129 | FAUCHER, A. G. |
| 07/21/65 | 2000 | AD 03.375 | UNITED STATES | WHITE SANDS | | | D<br>C | | | | | | | | 193 | NARCISI, R. S. |
| 07/23/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/23/65 | 1705 | NASA 10.128 GM | UNITED STATES | WALLOPS ISLAND | | Z V | | | | | | | | | 116 | SMITH, W. S. |
| 07/24/65 | 0936 | AF 03.266 | UNITED STATES | FORT CHURCHILL | | K | | | | | | | | | 179 | SOBERMAN, R. K. |
| 07/26/65 | 1201 | K -C9M-12<br>S -C47-001 | JAPAN | KAGOSHIMA | | | | | | | C | | | | N/A | TANABE, H.<br>NAKAMURA, T.<br>ASHIDA, S. |
| 07/26/65 | 1201 | K -C9M-12<br>S -C47-002 | JAPAN | KAGOSHIMA | | | | | | | F | | | | 350 | MATSUOKA, M.<br>YAMASHITA, K. |
| 07/27/65 | 0310 | K -C9M-13 | JAPAN | KAGOSHIMA | | | B | | A | | | | | | 317 | AOYAMA, I. |
| 07/27/65 | 0310 | K -C9M-13<br>S -C48-002 | JAPAN | KAGOSHIMA | | | E C | | | | | | | | 317 | SHIRO, I.<br>OSHIO, M.<br>FUGONO, N.<br>OGATA, T.<br>NAGAYAMA, M.<br>HATSUMI, H.<br>MIMURA, H. |
| 07/27/65 | 0310 | K -C9M-13<br>S -C48-003 | JAPAN | KAGOSHIMA | | | C | | | | | | | | N/A | OBAYASHI, T.<br>OYA, H.<br>TANABE, S. |
| 07/28/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 08/03/65 | 0852 | HAD 177 | AUSTRALIA | WOOMERA | | Y | | | | | | | | | 115 | UNKNOWN |
| 08/07/65 | 1114 | NASA 10.151 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 120 | SMITH, W. S. |
| 08/07/65 | 1200 | NASA 10.96 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 113 | SMITH, W. S. |
| 08/07/65 | 1830 | NASA 10.154 UA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 167 | PETERSON, J. W. |
| 08/07/65 | 1940 | NASA 10.162 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 127 | SMITH, W. S. |
| 08/07/65 | 1945 | NASA 10.165 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 109 | SMITH, W. S. |
| 08/07/65 | 2006 | NASA 10.168 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 120 | SMITH, W. S. |
| 08/08/65 | 0340 | NASA 10.169 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 122 | SMITH, W. S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/08/65 | 0400 | NASA 10.166 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 116 | SMITH, W. S. |
| 08/08/65 | 0415 | NASA 10.163 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 124 | SMITH, W. S. |
| 08/08/65 | 0840 | NASA 10.157 UA | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 165 | PETERSON, J. W. |
| 08/08/65 | 1002 | NASA 10.167 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 119 | SMITH, W. S. |
| 08/08/65 | 1015 | NASA 10.170 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 120 | SMITH, W. S. |
| 08/09/65 | 1010 | NASA 10.164 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 124 | SMITH, W. S. |
| 08/11/65 | 0135 | SK-6-4 | INDONESIA | LAPAN SPACE CENTER | | Z | C E | | A | | | | | | N/A | BAIQUNI, S. H. |
| 08/11/65 | 1149 | NASA 10.144 UA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 129 | HEMENWAY, C. L. |
| 08/12/65 | 1715 | AE 03.519 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 241 | HINTEREGGER, H. E. |
| 08/13/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 08/15/65 | 2135 | NASA 14.170 UA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 160 | HEMENWAY, C. L. |
| 08/17/65 | 2355 | SK-6-3 | INDONESIA | LAPAN SPACE CENTER | | Z | | | | | | | | | 100 | PRINGGOADISURJO, N. |
| 08/18/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 08/18/65 | 0710 | INCOSPAR JD-15 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |
| 08/19/65 | 0140 | NASA 14.133 NA | UNITED STATES | WALLOPS ISLAND | X | | | | | | | | | | 144 | POTTER, A. E. |
| 08/24/65 | 2159 | NASA 14.210 GI | UNITED STATES | WALLOPS ISLAND | | | C B | | | | E | | | | 162 | BOURDEAU, R. E. |
| 08/25/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 08/25/65 | 1831 | NASA 8.11 UA | UNITED STATES | WALLOPS ISLAND | | | X | | | | | | | | 902 | DAMON, K. R. |
| 08/26/65 | 1903 | AE 03.614 | UNITED STATES | EGLIN AFB | | | A | | | | | | | | 109 | ULWICK, J. C. |
| 09/01/65 | 1117 | NASA 14.213 UI | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 150 | HEIKKLA, W. J. A.<br>FEJER, J. A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/03/65 | 0517 | NASA 14.214 UI | UNITED STATES | WALLOPS ISLAND | | | X | | | | | | | | 153 | HEIKKLA, W. J. A.<br>FEJER, J. A. |
| 09/03/65 | 1930 | MP-12 | USSR | VOLGOGRAD | | V | | | | | | | | | 165 | INST OF EXPERI-MENTAL METECROLOGY |
| 09/09/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 09/09/65 | 0415 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 165 | INST OF EXPERI-MENTAL METECROLOGY |
| 09/09/65 | 2358 | NASA 14.75 GR | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 171 | STONE, R. G. |
| 09/15/65 | 0931 | INCOSPAR JD-1E | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |
| 09/15/65 | 2028 | NASA 14.244 UI | UNITED STATES | WALLOPS ISLAND | | | A<br>C | | | | | | | | 180 | SMITH, L. G.<br>BOWHILL, S. A. |
| 09/16/65 | 2305 | AE 18.315 | UNITED STATES | EGLIN AFB | | | | | | | | | | C | 344 | HOULT, C. P. |
| 09/17/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 09/17/65 | 1544 | NASA 14.235 UE | UNITED STATES | FORT CHURCHILL | | | | D | | | | | | | 160 | ANDERSON, K. A. |
| 09/17/65 | 1900 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 165 | INST OF EXPERI-MENTAL METECROLOGY |
| 09/17/65 | 2151 | NASA 4.138 II | UNITED STATES | WALLOPS ISLAND | | | B | | B | | | | | | 182 | STOREY, L. R. C. |
| 09/18/65 | 2202 | NASA 14.224 IA | UNITED STATES | CORONIE | | V | | | | | | | | | N/A | VELDKAMP, J. |
| 09/18/65 | 2203 | SURINAME-001 | UNITED STATES | CORONIE | | V | | | | | | | | | 205 | VELDKAMP, J.<br>DE JAGER, C. |
| 09/20/65 | 0327 | GEOPHYSICAL | USSR | | | | E<br>B | | | D<br>F | | | | | N/A | UNKNOWN |
| 09/20/65 | 1608 | NASA 14.236 UE | UNITED STATES | FORT CHURCHILL | | | | D | | | | | | | 146 | ANDERSON, K. A. |
| 09/21/65 | 2200 | NASA 14.225 IA | UNITED STATES | CORONIE | | V | | | | | | | | | N/A | VELDKAMP, J. |
| 09/21/65 | 2202 | SURINAME-002 | NETHERLANDS | CORONIE | | Z | | | | | | | | | 205 | VELDKAMP, J.<br>DE JAGER, C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/22/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 09/22/65 | 1007 | NASA 4.147 CG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 199 | GIACCONI,R.<br>WATERS,J.<br>GURSKY,H. |
| 09/23/65 | 0853 | SURINAME-003 | NETHERLANDS | CORONIE | | Z | | | | | | | | | 205 | VELDKAMP,J.<br>DE JAGER,C. |
| 09/23/65 | 1436 | NASA 8.36 GI | UNITED STATES | WALLOPS ISLAND | | | C E | | | | | | | | 805 | SERBU,G.P. |
| 09/24/65 | | AEROBEE | UNITED STATES | WHITE SANDS | X | | | | | | | | | | N/A | CUNNIFF,C. |
| 09/24/65 | 0852 | NASA 14.226 IA | UNITED STATES | CORONIE | | V | | | | | | | | | N/A | VELDKAMP,J. |
| 09/25/65 | 0400 | AD 03.722 | UNITED STATES | WHITE SANDS | | | | | | | | | | C | N/A | CUNIFF,C. |
| 09/25/65 | 2154 | NASA 4.139 II | UNITED STATES | WALLOPS ISLAND | | | B | | B | | | | | | 192 | STOREY,L.R.C. |
| 09/27/65 | 0854 | NASA 14.227 IA | UNITED STATES | CORONIE | | V | | | | | | | | | N/A | VELDKAMP,J. |
| 09/27/65 | 0854 | SURINAME-004 | NETHERLANDS | CORONIE | | Z | | | | | | | | | 205 | VELDKAMP,J.<br>DE JAGER,C. |
| 09/28/65 | 0910 | NASA 4.150 GA | UNITED STATES | WHITE SANDS | C | | C | | | C | | A | | | 183 | BERG,O.E.<br>WHIPPLE,E.C.<br>PICCIOLO,G.L.<br>KUPPERIAN,J.E.<br>WINDSOR,M. |
| 09/28/65 | 1443 | NASA 4.64 GI | UNITED STATES | WALLOPS ISLAND | | | C E | | | | | | | | 225 | HIRAO,K. |
| 09/29/65 | | AEROBEE | UNITED STATES | WHITE SANDS | | E | | | | | | | | | 200 | PIPER,J.L.<br>HARWIT,M.O.<br>MCNUTT,D.P.<br>FELDMAN,P.D.<br>SHIVANANDAN,K. |
| 09/29/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/29/65 | 0200 | MT-135-10<br>T -025 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 48 | ARIZUMI,N. |
| 09/29/65 | 0700 | MT-135-11<br>T -026 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 51 | ARIZUMI,N.<br>SUZUKI,S.<br>KOBANE,S. |
| 09/30/65 | 0420 | SE CE | FRANCE | | | G | X | | | | | | | | 230 | NEUSS,H. |
| 10/01/65 | 0130 | NASA 4.121 CG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 148 | FISHER,P.C. |
| 10/01/65 | 0357 | GEOPHYSICAL | USSR | | | | E<br>B | | | D<br>F | | | | | N/A | UNKNOWN |
| 10/02/65 | 0422 | SE CS | FRANCE | | | G | X | | | | | | | | 210 | NEUSS,H. |
| 10/04/65 | 0300 | K -C9M-14<br>S -C49-001 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 300 | OYA,H.<br>URIMOTO,S.<br>TANABE,S.<br>YAMAKI,H. |
| 10/04/65 | 0300 | K -C9M-14<br>S -C49-002 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 300 | HIRONO,M.<br>SHIRO,I.<br>MIYAZAKI,S.<br>FUGONO,N.<br>KOBAYASHI,T.<br>SUGIUCHI,H.<br>UEDA,A.<br>MIMURA,H.<br>SATO,O. |
| 10/04/65 | 0300 | K -C9M-14<br>S -C49-003 | JAPAN | KAGOSHIMA | | | D | | | | | | | | 300 | HIRONO,M.<br>SHIRO,I.<br>MIYAZAKI,S.<br>FUGONO,N.<br>KOBAYASHI,T.<br>SUGIUCHI,H.<br>UEDA,A.<br>MIMURA,H.<br>SATO,O. |
| 10/05/65 | 0042 | NASA 8.30 UI | UNITED STATES | WALLOPS ISLAND | | | A | | | | | | | | 960 | NISBET,J.S.<br>KING,O. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/05/65 | 0907 | NB 20.170 | UNITED STATES | VANDENBURG AFB | | | | | | E | | | | | N/A | MANGE, P. W. |
| 10/05/65 | 2321 | NASA 14.202 CA | UNITED STATES | FORT CHURCHILL | | | C<br>E | | | | | | | | 206 | BEDINGER, J. F.<br>SMITH, L. G. |
| 10/06/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 10/06/65 | 0300 | K -C6L-09<br>S -C60 | JAPAN | KAGOSHIMA | | V | | | | | | | | | 141 | AOYAMA, I.<br>SABURI, A. |
| 10/13/65 | 0313 | NASA 4.151 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 183 | MORTON, D. C. |
| 10/13/65 | 1601 | NASA 10.152 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 10/13/65 | 1611 | NASA 10.97 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 124 | SMITH, W. S. |
| 10/13/65 | 1651 | NASA 10.129 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 110 | SMITH, W. S. |
| 10/17/65 | | NIRO | UNITED STATES | FORT WAINWRIGHT | X | | | | | | | | | | N/A | ULWICK, J. C. |
| 10/18/65 | 0531 | AE 07.618 D | UNITED STATES | FORT WAINWRIGHT | | G | | | | | | | | | 103 | ULWICK, J. C. |
| 10/19/65 | 1730 | NASA 10.177 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 10/19/65 | 1730 | NASA 10.98 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 124 | SMITH, W. S. |
| 10/19/65 | 2000 | NASA 4.142 NA | UNITED STATES | WALLOPS ISLAND | | | E | | | | C | | | | 179 | BARTH, C. A. |
| 10/19/65 | 2310 | NASA 10.174 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 114 | SMITH, W. S. |
| 10/20/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 10/20/65 | 0705 | INCOSPAR JD-17 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |
| 10/20/65 | 1130 | NF 3.162 RR | UNITED STATES | WHITE SANDS | | | | | | B | | | | | 204 | HARWIT, M. O.<br>MCNUTT, D. P.<br>SHIVANANDAN, K. |
| 10/20/65 | 2035 | NASA 4.146 DS | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 184 | KOOMEN, M. J. |
| 10/21/65 | 1600 | NASA 4.164 UA | UNITED STATES | WALLOPS ISLAND | | | | | | | D<br>E | | | | 191 | FASTIE, W. G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/21/65 | 2054 | AE C7.619 D | UNITED STATES | FORT WAINWRIGHT | | | X | | | | | | | | 137 | ULWICK, J.C. |
| 10/22/65 | 2018 | V 54 | | HAMMAGUIR | | | C | | | | | | | | 210 | RAWER, K.<br>KAISER, P.<br>JACOBS, K.G.<br>BROSS, P. |
| 10/23/65 | 0530 | ND 3.167 | UNITED STATES | WHITE SANDS | C | | | | | | | | | | 254 | PACKER, D.M.<br>GULLEDGE, I.S. |
| 10/23/65 | 1538 | NASA 10.178 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W.S. |
| 10/23/65 | 1614 | NASA 10.175 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 118 | SMITH, W.S. |
| 10/23/65 | 1638 | NASA 10.172 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 114 | SMITH, W.S. |
| 10/25/65 | 0400 | ARCAS | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 10/25/65 | 1500 | NB 3.184 | UNITED STATES | WHITE SANDS | | | | | | D<br>F | | | | | 171 | CHUBB, T.A.<br>FRIEDMAN, H. |
| 10/26/65 | 1203 | MP-12 | USSR | KAPUSTIN YAR | | V | D | | | | | | | | 170 | INST OF EXPERIMENTAL METEOROLOGY |
| 10/27/65 | 2348 | NASA 10.179 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W.S. |
| 10/27/65 | 2348 | NASA 10.173 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | N/A | SMITH, W.S. |
| 10/28/65 | 0010 | NASA 10.176 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 117 | SMITH, W.S. |
| 10/28/65 | 0655 | V 55 | | HAMMAGUIR | | | C | | | | | | | | 210 | RAWER, K.<br>KAISER, P.<br>JACOBS, K.G.<br>BROSS, P. |
| 10/29/65 | 1130 | | UNITED STATES | WHITE SANDS | | | | | | B | | | | | N/A | UNKNOWN |
| 11/01/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 11/02/65 | 2000 | AE 13.559 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 686 | FAIRE, A.C. |
| 11/02/65 | 2340 | S-1 | UNITED STATES | EGLIN AFB | | V | C<br>D | | | | | | | | 134 | ROSENBERG, N.W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/03/65 | 0917 | AE 06.557 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 137 | FAIRE, A. C. |
| 11/03/65 | 1900 | AE 03.520 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 210 | HINTEREGGER, H. E. |
| 11/03/65 | 1900 | AF 03.523 | UNITED STATES | WHITE SANDS | | | | | | X | | | | | N/A | HINTEREGGER, H. E. |
| 11/09/65 | 0700 | NASA 18.02 GA | UNITED STATES | FORT CHURCHILL | | | C E | | | | | | | | 328 | CARIGNAN, G. R. |
| 11/09/65 | 1840 | NASA 14.168 UA | UNITED STATES | FORT CHURCHILL | | B C F | | | | | | | | | N/A | CARIGNAN, G. R. HORVATH, J. J. |
| 11/09/65 | 1900 | AF 03.523 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 238 | HINTEREGGER, H. E. |
| 11/09/65 | 1916 | NASA 18.03 GA | UNITED STATES | FORT CHURCHILL | | | C E | | | | | | | | 328 | CARIGNAN, G. R. |
| 11/10/65 | 0230 | AD 03.356 | UNITED STATES | WHITE SANDS | | | | | | | B | | | | 180 | SALISBURY, J. W. |
| 11/10/65 | 1923 | AE 06.379 | UNITED STATES | EGLIN AFB | | | X | | | | | | | | 114 | NARCISI, R. S. SAGALYN, R. C. |
| 11/11/65 | 0415 | S-2 | UNITED STATES | EGLIN AFB | | V | C D | | | | | | | | 137 | ROSENBERG, N. W. |
| 11/16/65 | 1600 | NASA 4.119 NA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 144 | FARLOW, N. H. |
| 11/16/65 | 1722 | AE 06.379 | UNITED STATES | EGLIN AFB | | | C | | | | | | | | N/A | NARCISI, R. S. SAGALYN, R. C. |
| 11/16/65 | 2215 | NA-YORKSHIRE | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/17/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 11/17/65 | | NIKE-CAJUN | UNITED STATES | EGLIN AFB | | | C | | | | | | | | N/A | NARCISI, R. S. SAGALYN, R. C. |
| 11/17/65 | 0425 | NASA 14.238 UE | UNITED STATES | FORT CHURCHILL | B | | | | | | E | | | | 178 | MURCRAY, W. B. |
| 11/17/65 | 0836 | INCOSPAR JD-18 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |
| 11/17/65 | 2336 | AE 06.499 | UNITED STATES | EGLIN AFB | | V | C D | | | | | | | | 155 | ROSENBERG, N. W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/18/65 | 0034 | NA-COVER | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | |
| 11/18/65 | 0220 | S-4 | UNITED STATES | EGLIN AFB | | | | | | | | | | | N/A | ROSENBERG,N.W. |
| 11/18/65 | 0415 | NA-FOUL BAY | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/18/65 | 0420 | AE 06.382 | UNITED STATES | EGLIN AFB | | | X | | | | | | | | 116 | NARCISI,R.S.<br>SAGALYN,R.C. |
| 11/18/65 | 0545 | NA-GUN HILL | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/18/65 | 0801 | S-5 | UNITED STATES | EGLIN AFB | | V | C<br>D | | | | | | | | 137 | ROSENBERG,N.W. |
| 11/18/65 | 0830 | NA-INDIAN GRND | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/18/65 | 1008 | NA-JAMESTOWN | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/18/65 | 1121 | AE 06.484 | UNITED STATES | EGLIN AFB | | V | C<br>D | | | | | | | | 155 | ROSENBERG,N.W. |
| 11/18/65 | 1134 | NA-INEZ | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/18/65 | 1431 | NASA 14.78 UA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 149 | HEMENWAY,C.L. |
| 11/18/65 | 1744 | CE-119 | FRANCE | | | V | | | | | | | | | 170 | NEUSS,H. |
| 11/19/65 | 1744 | CE-120 | FRANCE | | | V | | | | | | | | | 190 | NEUSS,H. |
| 11/20/65 | 0037 | NASA 14.109 GI | UNITED STATES | ANDOYA | | | D | | | | | | | | 122 | KANE,J.A. |
| 11/20/65 | 0520 | NASA 14.239 UE | UNITED STATES | FORT CHURCHILL | B | | | | | | E | | | | N/A | MURCRAY,W.B.<br>URCRAY,W.B. |
| 11/20/65 | 1753 | D-CCE | FRANCE | | S | | | | | | | | | | 400 | NEUSS,H. |
| 11/22/65 | 2309 | NA-MAXWELL | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/23/65 | 0030 | NA-WEEDHAMS PO | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/23/65 | 0359 | NA-PARAGON | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/23/65 | 0631 | NA-QUEENS FORT | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/23/65 | 0828 | NA-ROCKLEY | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/23/65 | 1016 | NA-SEAWELL | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 11/24/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 11/24/65 | 0306 | ARCAS | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 11/24/65 | 0404 | NASA 14.124 UE | UNITED STATES | FORT CHURCHILL | B | | | | | | E | | | | N/A | MURCRAY, W. B. |
| 11/24/65 | 1537 | NASA 14.242 UE | UNITED STATES | WALLOPS ISLAND | | | | | A | | | | | | 169 | HAYMES, R. C. |
| 11/25/65 | 0824 | CENTAURE | ARGENTINA | CHAMICAL | | V | | | | | | | | | 175 | ZARAGOZA, A. TEITELBAUM, H. |
| 11/26/65 | 0824 | CENTAURE | ARGENTINA | CHAMICAL | | V | | | | | | | | | 175 | ZARAGOZA, A. TEITELBAUM, H. |
| 11/29/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 11/30/65 | 0748 | NASA 4.155 GG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 179 | SCOLNIK, R. |
| 12/02/65 | 1730 | NASA 4.145 GS | UNITED STATES | WHITE SANDS | | | | | | C E | | | | | 185 | FREDGA, K. |
| 12/06/65 | 1358 | NASA 15.19 GI | UNITED STATES | ANDOYA | | | X | | | | | | | | N/A | KANE, J. A. |
| 12/08/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 12/09/65 | 1335 | HAD | AUSTRALIA | WOOMERA | | | | | | D | | | | | 85 | CARVER, J. H. HORTON, B. H. BURGER, F. G. |
| 12/09/65 | 2133 | AA C6.174 | UNITED STATES | FORT CHURCHILL | | Y | | | | | | | | | 138 | FAIRE, A. C. |
| 12/10/65 | 0600 | AA 06.173 | UNITED STATES | FORT CHURCHILL | | Y | | | | | | | | | 142 | FAIRE, A. C. |
| 12/11/65 | 0405 | CENTAURE | ITALY | SARDINIA | | | | | | | | | | | 160 | MAUERSBERGER, K. MULLER, D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/11/65 | 0552 | AA 05.172 | UNITED STATES | FORT CHURCHILL | | Y | | | | | | | | | 155 | FAIRE, A.C. |
| 12/11/65 | 1955 | AE 05.558 | UNITED STATES | FORT CHURCHILL | | Y | | | | | | | | | 155 | FAIRE, A.C. |
| 12/13/65 | 0620 | K-CSM-16<br>S-CS1-002 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 318 | OSHIO, M.<br>MIYAZAKI, S.<br>FUGONO, N.<br>KOSEKI, T.<br>KANINUMA, S.<br>OYAMA, K.<br>UEDA, A.<br>SATO, O. |
| 12/13/65 | 0620 | K-CSM-16<br>S-CS1-003 | JAPAN | KAGOSHIMA | C | | | | | | | | | | 325 | NAGATA, T.<br>TOHMATSU, T.<br>OGAWA, T. |
| 12/13/65 | 0620 | K-CSM-16<br>S-CS1-001 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 318 | OSHIO, M.<br>MIYAZAKI, S.<br>FUGONO, N.<br>KOSEKI, T.<br>KANINUMA, S.<br>OYAMA, K.<br>UEDA, A.<br>SATO, O. |
| 12/15/65 | 0735 | INCOSPAR JD-20 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M.S.V. |
| 12/15/65 | 1700 | NASA 14.247 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>A | | | | | | | | 182 | SMITH, L.G.<br>BOWHILL, S.A. |
| 12/15/65 | 1919 | NASA 14.68 II | UNITED STATES | NATAL | | | C<br>B | | | E | | | | | 185 | BLUMLE, L.J. |
| 12/17/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 12/18/65 | 0459 | NASA 14.69 II | UNITED STATES | NATAL | | | C<br>B | | | E | | | | | 188 | BLUMLE, L.J. |
| 12/18/65 | 0600 | K-CSM-17<br>S-CS2-001 | JAPAN | KAGOSHIMA | | | B | | | | | | | | 316 | YAMBUZAKI, T.<br>NAKADAN, K.<br>OGAWA, T. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/18/65 | 0600 | K -C9M-17<br>S -C52-002 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 332 | YAMAGUCHI,T.<br>URIMOTO,S.<br>IWAI,A. |
| 12/18/65 | 0600 | K -C9M-17<br>S -C52-003 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 312 | TAKEUCHI,H.<br>IMAI,T.<br>OTSUKA,Y.<br>TSUTSUMI,M. |
| 12/22/65 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 01/05/66 | | | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 01/08/66 | 1311 | 154-C53 | INDIA | THUMBA | | V | C | | | | | | | | 150 | BHAVSAR,P.D.<br>PRAKASH,S. |
| 01/10/66 | 1714 | NASA 14.248 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>A | | | | | | | | 186 | SMITH,L.G.<br>BOWHILL,S.R. |
| 01/12/66 | 1230 | SUPARCO-019/66 | PAKISTAN | SONMIANI | | A | | | | | | | | | 58 | RAHMATULLAH,M. |
| 01/12/66 | 1400 | 04 CNAE 6601 | BRAZIL | NATAL | | A | | | | | | | | | 60 | DE MENDONCA,F.<br>TEPPER,M.<br>NKNOWN |
| 01/17/66 | 1756 | CE-127 | ALGERIA<br>FRANCE | HAMMAGUIR | | | X | | | | | | | | 124 | UNKNOWN |
| 01/17/66 | 2239 | NASA 14.262 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 206 | BEDINGER,J.F. |
| 01/18/66 | 0032 | NASA 14.263 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 205 | BEDINGER,J.F. |
| 01/18/66 | 0200 | NASA 14.264 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 167 | BEDINGER,J.F. |
| 01/18/66 | 0319 | NASA 4.90 GG | UNITED STATES | WALLOPS ISLAND | | | | | | | C | | | | 134 | WRIGHT,D.U. |
| 01/18/66 | 0512 | NASA 14.265 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 207 | BEDINGER,J.F. |
| 01/18/66 | 1131 | NASA 14.266 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 213 | BEDINGER,J.F. |
| 01/19/66 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/19/66 | 0200 | MT-135-14 T-031 | JAPAN | KAGOSHIMA | | A C | | | | | | | | | 59 | ARIZUMI, N. SUZUKI, S. KOBANE, S. |
| 01/19/66 | 0930 | INCOSPAR 23 | INDIA | THUMBA | | A | | | | | | | | | 77 | RAO, M. S. V. |
| 01/19/66 | 1030 | MT-135-13 T-032 | JAPAN | KAGOSHIMA | | A C | | | | | | | | | 49 | YOSHITAKE, M. ARIZUMI, N. SUZUKI, S. |
| 01/21/66 | 0814 | D-021 | ALGERIA FRANCE | HAMMAGUIR | | V | | | | | | | | | 500 | UNKNOWN |
| 01/23/66 | 0606 | AC 15.732 | UNITED STATES | FORT CHURCHILL | B | | C E | | | | | | | | 304 | SANDOCK, J. |
| 01/23/66 | 0742 | NASA 10.185 CM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 125 | SMITH, W. S. |
| 01/25/66 | 0152 | NASA 10.158 UA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 167 | PETERSON, J. W. |
| 01/26/66 | 1218 | SUPARCO-020/66 | PAKISTAN | SONMIANI | | A | | | | | | | | | 61 | RAHMATULLAH, M. JAFRI, S. A. |
| 01/26/66 | 1745 | 1S4-059 | UNITED STATES | BARKING SANDS | | Y | | | | | | | | | 92 | SMITH, L. B. |
| 01/26/66 | 2350 | 1S4-060 | UNITED STATES | BARKING SANDS | | Y | | | | | | | | | 110 | SMITH, L. B. |
| 01/27/66 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 01/27/66 | 0129 | NC 3.186 | UNITED STATES | WHITE SANDS | | | C D E | | | | | | | | 243 | YOUNG, J. M. HOLMES, J. C. JOHNSON, C. Y. |
| 02/01/66 | 1800 | NE 3.156 R | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 209 | AUSTIN, W. E. GARRETT, D. SNIDER, C. PURCELL, J. D. |
| 02/01/66 | 2011 | NASA 10.182 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 117 | SMITH, W. S. |
| 02/01/66 | 2046 | NASA 10.147 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 118 | SMITH, W. S. |
| 02/01/66 | 2315 | SL-307 | UNITED KINGDOM | WOOMERA | | | | | | E F | | | | | 216 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/02/66 | 0202 | NASA 10.186 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 118 | SMITH, W. S. |
| 02/02/66 | 1004 | NASA 4.50 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 175 | MORTON, D. C. |
| 02/03/66 | 1831 | NASA 10.159 UA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 131 | PETERSON, J. W. |
| 02/04/66 | 0154 | NASA 10.143 UA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 152 | PETERSON, J. W. |
| 02/05/66 | 2320 | CE-016 | ESRO<br>DENMARK<br>NORWAY<br>UNITED KINGDOM | ANDOYA | | | X | | | | | | | | 120 | BOYD, R. L. F.<br>PETERSEN, O. E.<br>KAISER, T. R. |
| 02/08/66 | 0500 | 154-C70 | UNITED STATES | BARKING SANDS | | Y | | | | | | | | | 100 | SMITH, L. B. |
| 02/08/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A<br>C<br>F | | | | | | | | | 62 | FRITH, R. |
| 02/10/66 | | ATLAS POD | UNITED STATES | VANDENBURG AFB | | | | | | | | | | A | N/A | LOVETT, J. |
| 02/10/66 | 0542 | NASA 14.188 GE | UNITED STATES | FORT CHURCHILL | B | | | B | | | | | | | 178 | EVANS, D. S. |
| 02/10/66 | 0709 | NASA 10.187 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 117 | SMITH, W. S. |
| 02/10/66 | 0748 | NASA 10.148 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 114 | SMITH, W. S. |
| 02/10/66 | 0800 | NASA 10.183 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 02/10/66 | 1800 | NASA 10.145 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 122 | SMITH, W. S. |
| 02/10/66 | 1841 | NASA 10.149 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 114 | SMITH, W. S. |
| 02/10/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A<br>C<br>F | | | | | | | | | 62 | FRITH, R. |
| 02/10/66 | 2130 | NASA 10.184 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 02/11/66 | 0130 | CE-015 | ESRO<br>DENMARK<br>NORWAY<br>UNITED KINGDOM | ANDOYA | | | X | | | | | | | | N/A | BOYD, R. L. F.<br>KAISER, T. R.<br>PETERSEN, O. E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/12/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 62 | FRITH, R. |
| 02/14/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 62 | FRITH, R. |
| 02/16/66 | 0330 | INCOSPAR 24 | INDIA | THUMBA | | A | | | | | | | | | 67 | RAO, M. S. V. |
| 02/16/66 | 0430 | SUPARCO | PAKISTAN | SONMIANI | | A | | | | | | | | | 64 | RAHMATULLAH, M. JAFRI, S. A. |
| 02/16/66 | 1336 | SUPARCO | PAKISTAN | SONMIANI | | A | | | | | | | | | 60 | RAHMATULLAH, M. JAFRI, S. A. |
| 02/17/66 | 0256 | NASA 14.189 GE | UNITED STATES | FORT CHURCHILL | B | | | B | | | | | | | 209 | EVANS, D. S. |
| 02/17/66 | 1616 | NASA 14.243 UE | UNITED STATES | WALLOPS ISLAND | | | | | A | | | | | | 186 | HAYMES, R. C. |
| 02/18/66 | | NIKE-JAVELIN | UNITED STATES | | | | C | | | | | | | | N/A | ROSENBERG, N. W. |
| 02/18/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 64 | FRITH, R. |
| 02/19/66 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 02/19/66 | 0105 | AFS. SC2 | UNITED STATES | ARECIBO | | V | | | | | | | | | 192 | ROSENBERG, N. W. |
| 02/20/66 | 0530 | NASA 4.162 UA | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 166 | FASTIE, W. G. |
| 02/20/66 | 0645 | AFS. SC5 | UNITED STATES | ARECIBO | | V | | | | | | | | | 192 | ROSENBERG, N. W. |
| 02/21/66 | 1310 | NC 7.181 | UNITED STATES | EGLIN AFB | | | C | | | E F | | | | | 175 | GROBECKER, A. J. |
| 02/21/66 | 1957 | NC 7.180 | UNITED STATES | EGLIN AFB | | | C | | | E F | | | | | 188 | GROBECKER, A. J. |
| 02/21/66 | 2023 | NC 7.178 | UNITED STATES | FORT CHURCHILL | | | C | | | E F | | | | | 196 | GROBECKER, A. J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/21/66 | 2200 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 64 | FRITH, R. |
| 02/22/66 | 1829 | ESROC14/001 | INTERNATIONAL SWEDEN UNITED STATES | ANDOYA | | | X | X | | | | | | | 114 | RIEDLER, W. W. |
| 02/23/66 | 1006 | HAD 186 | AUSTRALIA UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | N/A | UNKNOWN |
| 02/23/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 65 | FRITH, R. |
| 02/23/66 | 2315 | ESROC14/002 | INTERNATIONAL UNITED STATES SWEDEN | ANDOYA | | | X | X | | | | | | | 118 | UNKNOWN |
| 02/25/66 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 02/25/66 | 1359 | NASA 14.211 IA REHEAR-9 | UNITED STATES PAKISTAN | SONMIANI | | V | | | | | | | | | 200 | RAHMATULLAH, M. |
| 02/26/66 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 02/26/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 57 | FRITH, R. |
| 02/27/66 | 1657 | NASA 14.251 UM | UNITED STATES | ASCENSION ISLAND | | Z | | | | | | | | | 131 | HORVATH, J. J. |
| 02/28/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 65 | FRITH, R. |
| 03/02/66 | 1548 | 07 CNAE 6604 | BRAZIL | NATAL | | A | | | | | | | | | 60 | DE MENDONCA, F. TEPPER, M. |
| 03/02/66 | 1755 | NASA 4.99 DS | UNITED STATES | WALLOPS ISLAND | | | | | | E | | | | | 228 | HINTEREGGER, H. E. NEWBURGH, R. G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/02/66 | 1759 | NASA 8.25 GA -GI | UNITED STATES | WALLOPS ISLAND | | G | C E D | | | | | | | | 536 | PELZ,D.T.<br>BRACE,L.H.<br>BRINTON,H.C. |
| 03/02/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 65 | FRITH,R. |
| 03/03/66 | 2154 | NASA 4.100 DS | UNITED STATES | WALLOPS ISLAND | | | | | | E | | | | | 219 | HINTEREGGER,H.E.<br>NEWBURGH,R.G. |
| 03/03/66 | 2226 | CE-C77 | ALGERIA<br>FRANCE | HAMMAGUIR | | X | | | | | | | | | 125 | UNKNOWN |
| 03/04/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 64 | FRITH,R. |
| 03/05/66 | 0350 | L-C3H-001 | JAPAN | KAGOSHIMA | | | C | | | | | | | | N/A | UNKNOWN |
| 03/07/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 68 | FRITH,R. |
| 03/08/66 | 0742 | NASA 4.148 CG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 165 | GIACCONI,R.<br>GORENSTEIN,P. |
| 03/09/66 | 2000 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 65 | FRITH,R. |
| 03/09/66 | 2230 | CE-C12 | DENMARK<br>ESRO<br>FED REP OF GERMANY<br>UNITED KINGDOM | ANDOYA | X | | X | | | | | | | | 95 | RAWER,K.<br>BOYD,R.L.F.<br>DALZIEL,R.<br>PETERSEN,O.E. |
| 03/10/66 | 0845 | AF 07.327 | UNITED STATES | EGLIN AFB | | F | | | | | | | | | 224 | MCISAAC,J.P. |
| 03/10/66 | 2230 | CE-C11 | ESRO<br>FED REP OF GERMANY<br>DENMARK<br>UNITED KINGDOM | ANDOYA | X | | X | | | | | | | | 115 | RAWER,K.<br>BOYD,R.L.F.<br>DALZIEL,R.<br>PETERSEN,O.E. |
| 03/14/66 | 0513 | NASA 14.190 GE | UNITED STATES | FORT CHURCHILL | B | | | B | | | | | | | N/A | EVANS,D.S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/16/66 | 1210 | INCOSPAR 25 | INDIA | THUMBA | | A | | | | | | | | | 67 | RAO,M.S.V. |
| 03/16/66 | 1500 | 08 CNAE 6605 | BRAZIL | NATAL | | A | | | | | | | | | 63 | DE MENDONCA,F.<br>TEPPER,M. |
| 03/16/66 | 1510 | SUPARCO | PAKISTAN<br>UNITED KINGDOM<br>UNITED STATES | SONMIANI | | A | | | | | | | | | 62 | RAHMATULLAH,M.<br>JAFRI,S.A. |
| 03/20/66 | 1215 | K-CSM-15<br>S-CE3-001 | JAPAN | KAGOSHIMA | | | C<br>E | A | | | | | | | 300 | SHIRO,I.<br>FUGONO,N.<br>HIGASHIMURA,M.<br>AKAMATSU,M.<br>MIMURA,H.<br>SHIMIZU,M. |
| 03/20/66 | 1215 | K-CSM-15<br>S-CE3-002 | JAPAN | KAGOSHIMA | | | | | | F | | | | | 300 | YAMASHITA,K.<br>OGAWA,H.<br>MATSUOKA,M. |
| 03/20/66 | 1215 | K-CSM-15<br>S-CE3-003 | JAPAN | KAGOSHIMA | | | | | | C | | | | | 300 | TANABE,H.<br>ASHIDA,S.<br>NAKAMURA,T. |
| 03/21/66 | 0003 | NASA 14.109 GI | UNITED STATES | ANDOYA | | | X | | | | | | | | N/A | KANE,J.A. |
| 03/22/66 | 0938 | HAD 181 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | N/A | UNKNOWN |
| 03/23/66 | 0407 | NASA 18.07 GE | UNITED STATES | FORT CHURCHILL | B | | | A | B | | | | | | 290 | BURROWS,K.<br>EVANS,D.C.<br>LIND,D.<br>OGILVIE,K.<br>TOLARIK,J. |
| 03/24/66 | 1531 | NASA 10.180 IM<br>REHBAR-11 | PAKISTAN<br>UNITED KINGDOM<br>UNITED STATES | SONMIANI | | Z | | | | | | | | | 135 | GROVES,G.V.<br>RAHMATULLAH,M.<br>AHMAD,M.S. |
| 03/24/66 | 1645 | INCOSPAR 15.04 | INDIA | THUMBA | | V | | | | | | | | | 163 | BHAVSAR,P.D. |
| 03/24/66 | 1702 | ESRO-V80 | ALGERIA<br>FRANCE | HAMMAGUIR | | | | | | | | | | E | 209 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/25/66 | 0439 | SUPARCO | PAKISTAN<br>UNITED KINGDOM<br>UNITED STATES | SONMIANI | | A | | | | | | | | | 66 | RAHMATULLAH, M.<br>JAFRI, S. A. |
| 03/27/66 | 0707 | AA -2 -103 | CANADA | FORT CHURCHILL | B | | | | | D | | | | | 153 | MCDIARMID, I. B.<br>SHEPHERD, G. G.<br>FORSYTH, P. A. |
| 03/27/66 | 1712 | NASA 14.165 IM<br>REHBAR-12 | PAKISTAN<br>UNITED KINGDOM<br>UNITED STATES | SONMIANI | | Z | | | | | | | | | 190 | GROVES, G. V.<br>RAHMATULLAH, M.<br>AHMAD, M. S. |
| 03/30/66 | | ATLAS-POD | UNITED STATES | VANDENBURG AFB | | | | A | | | | | | D | N/A | SANDOCK, J.<br>SAGALYN, R. C.<br>NEWMAN, P. |
| 03/30/66 | 0419 | AK -1 -004 | CANADA | FORT CHURCHILL | B | | C<br>E | D | | | | | | | 154 | ANGER, C. D.<br>MCNAMARA, A. G.<br>WILSON, B. G. |
| 03/30/66 | 0920 | NB 20.152 | UNITED STATES | VANDENBURG AFB | E<br>D | G | | | | | | | | | N/A | MANGE, P. W. |
| 03/30/66 | 1830 | AF 03.524 | UNITED STATES | WHITE SANDS | | | C | | | E | | | | | 240 | HINTEREGGER, H. E. |
| 04/04/66 | 0807 | ESRO-V | ALGERIA<br>FRANCE | HAMMAGUIR | | | | | | | | | | E | 23 | UNKNOWN |
| 04/04/66 | 1652 | NASA 14.216 AI | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 174 | CALVERT, W. |
| 04/08/66 | 0401 | NASA 14.76 UI | UNITED STATES | WALLOPS ISLAND | | | X | | | | | | | | 159 | HEIKKILA, W. J.<br>FEJER, J. A. |
| 04/13/66 | 0730 | INCOSPAR JD-26 | INDIA | THUMBA | | A | | | | | | | | | 69 | RAO, M. S. V. |
| 04/13/66 | 1257 | SUPARCO-025/66 | PAKISTAN | SONMIANI | | A | | | | | | | | | 62 | RAHMATULLAH, M.<br>JAFRI, S. A. |
| 04/14/66 | 0555 | NASA 18.08 GE | UNITED STATES | FORT CHURCHILL | B | | B | | B | | | | | | 296 | BURROWS, K.<br>EVANS, D. C.<br>LIND, D. |
| 04/14/66 | 1500 | NASA 4.143 NA | UNITED STATES | WHITE SANDS | C | G | | | | E | | | | | 183 | BARTH, C. A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/14/66 | 1508 | NASA 4.24 US | UNITED STATES | WHITE SANDS | E | | | | | | | | | | 192 | RENSE, W. A.<br>PARKER, R.<br>BRUNER, E. |
| 04/18/66 | 2153 | SA-I | UNITED KINGDOM | SOUTH UIST | | A<br>C<br>F | | | | | | | | | 69 | HEIKKLA, W. J. A.<br>BARRINGTON, R. |
| 04/20/66 | 0450 | K -C8 -13 | JAPAN | KAGOSHIMA | | | | X | X | | | | | | N/A | OGAWA, T. |
| 04/20/66 | 1205 | K -C8 -13<br>S -C54-002 | JAPAN | KAGOSHIMA | | V | | | | | | | | | 155 | KIMURAH, H.<br>SAITO, K.<br>WATANABE, C. |
| 04/20/66 | 1205 | K -C8 -13<br>S -C54-001 | JAPAN | KAGOSHIMA | | | | | A | | | | | | N/A | NAKADAN, K.<br>SAKURAI, T.<br>KONDO, S. |
| 04/21/66 | 0210 | 154-C75 | UNITED STATES | TONOPAH TEST RANGE | | V | | | | | | | | | 160 | SMITH, L. B. |
| 04/21/66 | 1125 | NASA 4.165 UA | UNITED STATES | WHITE SANDS | | | | | | | E | | | | 154 | FASTIE, W. G.<br>MOOS, H. W. |
| 04/21/66 | 2203 | SA-I | UNITED KINGDOM | SOUTH UIST | | A<br>C<br>F | | | | | | | | | 68 | FRITH, R. |
| 04/22/66 | 1900 | RUBIS-03 | ALGERIA<br>FRANCE | HAMMAGUIR | | A<br>V | X | X | X | | | | | | 2035 | UNKNOWN |
| 04/26/66 | 0012 | NASA 14.249 IM | UNITED STATES | SONMIANI | | Z | | | | | | | | | 190 | GROVES, G. V. |
| 04/27/66 | 2154 | 10-1438 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 60 | LICHTENSTEIN, L. E. |
| 04/28/66 | 1235 | NASA 4.189 DS | UNITED STATES | WHITE SANDS | X | | | | | | | | | | 175 | KOOMEN, M. J.<br>PURCELL, J. D.<br>SLOAN, W. A. |
| 04/28/66 | 2335 | ND 3.172 R | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 175 | KOOMEN, M. J.<br>PURCELL, J. D.<br>SLOAN, W. A. |
| 04/29/66 | 0345 | AD 03.723 | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 175 | CUNNIFF, C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/30/66 | 1120 | MT-135-15<br>T-040 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 53 | ARIZUMI, N.<br>SUZUKI, S.<br>KOBANE, S. |
| 04/30/66 | 1940 | MT-135-16<br>T-041 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 54 | ARIZUMI, N.<br>SUZUKI, S.<br>KOBANE, S. |
| 05/01/66 | 0630 | AB 19.286 | UNITED STATES | FORT CHURCHILL | B | | B | | | | | | | | 723 | VANCOUR, R.P. |
| 05/01/66 | 2210 | NASA 10.190 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 126 | SMITH, W.S. |
| 05/02/66 | 0114 | NASA 10.188 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 131 | SMITH, W.S. |
| 05/02/66 | 0119 | NASA 10.194 GM | UNITED STATES | NATAL | | Z | | | | | | | | | 126 | SMITH, W.S. |
| 05/02/66 | 0120 | NASA 10.195 GM | UNITED STATES | NATAL | | Z | | | | | | | | | 125 | SMITH, W.S. |
| 05/02/66 | 0155 | 13 CNAE 6610 | BRAZIL<br>UNITED STATES<br>ARGENTINA | NATAL | | Z | | | | | | | | | 52 | MENDONCA, F.D.<br>TEPPER, M.<br>RICCIARDI, H.J. |
| 05/02/66 | 0200 | MT-135-17<br>T-042 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 55 | ARIZUMI, N.<br>SUZUKI, S.<br>KOBANE, S. |
| 05/02/66 | 0232 | NASA 10.192 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 126 | SMITH, W.S. |
| 05/03/66 | 2201 | NASA 10.191 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 126 | SMITH, W.S. |
| 05/04/66 | 0008 | NASA 10.193 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 123 | SMITH, W.S. |
| 05/04/66 | 0037 | NASA 10.189 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 119 | SMITH, W.S. |
| 05/04/66 | 0200 | D-012 | ALGERIA<br>FRANCE | HAMMAGUIR | | X | | | | | | | | | N/A | UNKNOWN |
| 05/04/66 | 1200 | NASA 10.195 | UNITED STATES<br>BRAZIL | NATAL | | Z | | | | | | | | | 141 | MENDONCA, F.D.<br>SMITH, W.S. |
| 05/05/66 | 0414 | SL-304 | UNITED KINGDOM | WOOMERA | | | | | | F | | | | | N/A | UNKNOWN |
| 05/09/66 | 1520 | NASA 4.106 NP | UNITED STATES | WHITE SANDS | | | | | | | | | | X | 174 | BROWN, W.E. JR. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/12/66 | 1800 | D-013 | ALGERIA<br>FRANCE | HAMMAGUIR | | X | | | | | | | | | 464 | UNKNOWN |
| 05/15/66 | 0503 | CE-CC5 | ESRO<br>GREECE<br>NETHERLANDS<br>UNITED KINGDOM | KARYSTOS | | | | | | X | | | | | 140 | DE JAGER, C.<br>STEWARDSON, E. A.<br>BOYD, R. L. F. |
| 05/15/66 | 0951 | AE-CC1 | ESRO<br>DENMARK<br>GREECE<br>UNITED KINGDOM | KARYSTOS | | | X | | | | | | | | 110 | BOYD, R. L. F.<br>PETERSEN, O. E.<br>RATCLIFFE, J. A. |
| 05/17/66 | 0842 | HAD 188 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | N/A | UNKNOWN |
| 05/18/66 | 0402 | NASA 4.171 UG | UNITED STATES | WALLOPS ISLAND | | | | | | D<br>E | | | | | 210 | CODE, A. D.<br>BLESS, R. C.<br>HOUCK, T. |
| 05/18/66 | 1415 | SUPARCO-026/66 | PAKISTAN | SONMIANI | | A | | | | | | | | | 62 | JAFRI, S. A. |
| 05/18/66 | 1550 | 14 CNAE 6611 | BRAZIL<br>UNITED STATES<br>ARGENTINA | NATAL | | Z | | | | | | | | | 53 | MENDONCA, F. D.<br>TEPPER, M.<br>RICCIARDI, H. J. |
| 05/18/66 | 1842 | M-85 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 66 | LICHTENSTEIN, L. E. |
| 05/18/66 | 2022 | N.1C1449 | ARGENTINA | CHAMICAL | | V | | | | | | | | | N/A | LICHTENSTEIN, L. E. |
| 05/20/66 | 0800 | NASA 15.26 GI | UNITED STATES | KORONI BEACH | | | C<br>A | | | | | | | | N/A | AIKIN, A. C.<br>KANE, J. A. |
| 05/20/66 | 0845 | NASA 15.27 GI | UNITED STATES | KORONI BEACH | | | C<br>A | | | | | | | | N/A | AIKIN, A. C.<br>KANE, J. A. |
| 05/20/66 | 0901 | ESRO-A03 | ESRO<br>DENMARK<br>GREECE<br>UNITED KINGDOM | KARYSTOS | | | X | | | | | | | | 99 | BOYD, R. L. F.<br>PETERSEN, O. E.<br>RATCLIFFE, J. A. |
| 05/20/66 | 0930 | NASA 15.28 GI | UNITED STATES | KORONI BEACH | | | C<br>A | | | | | | | | N/A | AIKIN, A. C.<br>KANE, J. A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/20/66 | 0930 | NASA 15.38 GI | GREECE<br>UNITED STATES | KORONI BEACH | | | X | | | | | | | | N/A | AIKIN,A.C.,JR.<br>KANE,J.A. |
| 05/20/66 | 0930 | CE-C19 | ESRO<br>FED REP OF GERMANY<br>NETHERLANDS<br>UNITED KINGDOM | KARYSTOS | | | X | | X | | | | | | 118 | DE JAGER,C.<br>BOYD,R.L.F.<br>LUST,R. |
| 05/20/66 | 1015 | NASA 15.29 GI | UNITED STATES | KORONI BEACH | | | C<br>A | | | | | | | | N/A | AIKIN,A.C.<br>KANE,J.A. |
| 05/20/66 | 1105 | NASA 15.30 GI | UNITED STATES | KORONI BEACH | | | C<br>A | | | | | | | | N/A | AIKIN,A.C.<br>KANE,J.A. |
| 05/20/66 | 1510 | NASA 4.95 GS | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 172 | UNDERWOOD,J.H. |
| 05/20/66 | 1904 | NASA 8.44 GR | UNITED STATES | WALLOPS ISLAND | | | | | | A | | | | | 918 | STONE,R.G.<br>WEBER,R.R. |
| 05/20/66 | 2330 | NASA 4.92 GS | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 195 | NEUPERT,W.M. |
| 05/21/66 | 0930 | NASA 15.31 GI | UNITED STATES | KORONI BEACH | | | C<br>A | | | | | | | | N/A | AIKIN,A.C.<br>KANE,J.A. |
| 05/24/66 | 0507 | NASA 4.51 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 132 | MORTON,D.C. |
| 05/24/66 | 2300 | SR-C31 | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 06/01/66 | 1631 | 15 CNAE 6612 | BRAZIL<br>UNITED STATES<br>ARGENTINA | NATAL | | A<br>C | | | | | | | | | 55 | MENDONCA,F.D.<br>TEPPER,M.<br>RICCIARDI,H.J. |
| 06/08/66 | 1450 | 154-C53 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 173 | SMITH,L.B. |
| 06/08/66 | 1515 | 154-C66 | UNITED STATES | BARKING SANDS | | Y | | | | | | | | | 100 | SMITH,L.B. |
| 06/12/66 | 0554 | 154-C55 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 165 | SMITH,L.B. |
| 06/12/66 | 0737 | 154-C52 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 160 | SMITH,L.B. |
| 06/12/66 | 0857 | 154-C56 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 170 | SMITH,L.B. |
| 06/12/66 | 0918 | 154-C71 | UNITED STATES | BARKING SANDS | | Y | | | | | | | | | 100 | SMITH,L.B. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/14/66 | 0918 | NASA 14.270 UI | UNITED STATES | WALLOPS ISLAND | | | A C | | | | | | | | 186 | BOWHILL,S.A. MECHTLY,E.A. |
| 06/14/66 | 1427 | DRAGON | FRANCE | HAMMAGUIR | | | | | | E | | | | | 480 | BLAMONT,J.E. |
| 06/15/66 | 0835 | HAD 185 | AUSTRALIA UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | N/A | UNKNOWN |
| 06/15/66 | 1343 | 10-145C | ARGENTINA | CHAMICAL | | A C | | | | | | | | | N/A | LICHTENSTEIN,L.E. |
| 06/16/66 | 0546 | 154-C84 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 170 | SMITH,L.B. |
| 06/16/66 | 0625 | 154-CE2 | UNITED STATES | BARKING SANDS | | Y | | | | | | | | | 110 | SMITH,L.B. |
| 06/17/66 | | NIKE-CAJUN | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG,N.W. |
| 06/18/66 | 0025 | AF C6.501 | UNITED STATES | EGLIN AFB | | V Z | | | | | | | | | 240 | ROSENBERG,N.W. |
| 06/23/66 | 0635 | NASA 10.199 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | N/A | SMITH,W.S. |
| 06/23/66 | 0752 | NASA 10.197 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH,W.S. |
| 06/23/66 | 0853 | AF C7.621 | UNITED STATES | EGLIN AFB | | V Z | | | | | | | | | 175 | ROSENBERG,N.W. |
| 06/24/66 | | NIRO | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG,N.W. |
| 06/24/66 | | NIRO | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG,N.W. |
| 06/25/66 | 0030 | AF C7.506 | UNITED STATES | EGLIN AFB | | G | | | | | | | | | 192 | ROSENBERG,N.W. |
| 06/25/66 | 0236 | AF C7.509 | UNITED STATES | EGLIN AFB | | G | | | | | | | | | 159 | ROSENBERG,N.W. |
| 06/25/66 | 0715 | AF C7.620 | UNITED STATES | EGLIN AFB | | G | | | | | | | | | 143 | ROSENBERG,N.W. |
| 06/25/66 | 0857 | AF C7.507 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 192 | ROSENBERG,N.W. |
| 06/26/66 | | NIKE-APACHE | UNITED STATES | ANDOYA | | | A | | | | | | | | N/A | NEWMAN,P. |
| 06/27/66 | 1705 | ESRO-V60 | ALGERIA FRANCE | HAMMAGUIR | | | | | | | | | | E | 123 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/28/66 | 0253 | ISRC-SK-008 | ESRO<br>FED REP OF GERMANY<br>ITALY<br>UNITED KINGDOM | SARDINIA | | V | | | | | | | | | 228 | LUST, R.<br>FRITH, R. |
| 06/28/66 | 1723 | AC 19.191 | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 562 | ULWICK, J.C. |
| 07/04/66 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 07/05/66 | | SATURN | UNITED STATES | CAPE KENNEDY | | | | | | | | | | C | N/A | LOVETT, J. |
| 07/06/66 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y<br>A | | | | | | | | | N/A | UNKNOWN |
| 07/07/66 | 0815 | NASA 14.59 IE<br>NASA 14.59 II | UNITED STATES<br>PAKISTAN | THUMBA | | | B | | | | | | | | 167 | SASTRY, T.S.G.<br>PRAKASH, S. |
| 07/08/66 | 1947 | S-18 | ITALY | SARDINIA | | | | | | | | | | | 200 | UNKNOWN |
| 07/11/66 | 1918 | NASA 14.96 UA | UNITED STATES | FORT CHURCHILL | | | D<br>C | | | | | | | | 202 | SCHAEFER, E. J. |
| 07/12/66 | 2100 | NASA 8.12 UA | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 1015 | DAMON, K. R. |
| 07/13/66 | | ATLAS-POD | UNITED STATES | VANDENBURG AFB | | | A | | | | | | | | N/A | NEWMAN, P.<br>HECKSHER, J. |
| 07/13/66 | 0620 | INCOSPAR JD-27 | INDIA | THUMBA | | A | | | | | | | | | 69 | RAO, M.S.V. |
| 07/13/66 | 0730 | SUPARCO-028/66 | PAKISTAN | SONMIANI | | A | | | | | | | | | 60 | JAFRI, S.A. |
| 07/13/66 | 1944 | R-8S | ITALY | SARDINIA | | | | | | | | | | | N/A | UNKNOWN |
| 07/13/66 | 2244 | 10-1448 | ARGENTINA | CHAMICAL | | A<br>C | | | | | | | | | N/A | LICHTENSTEIN, L.E. |
| 07/14/66 | 0118 | P-467 | ARGENTINA | CHAMICAL | | A<br>C | | | | | | | | | N/A | LICHTENSTEIN, L.E. |
| 07/14/66 | 1010 | NC 20.189 | UNITED STATES | VANDENBURG AFB | | | D | | | | | | | | 100 | HOFFMAN, J.H. |
| 07/14/66 | 1515 | NASA 14.166 II | UNITED STATES<br>FED REP OF GERMANY | WALLOPS ISLAND | | | C<br>A | | | | | | | | 195 | RAWER, K.<br>BAUER, S.J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/14/66 | 1517 | P-462 | ARGENTINA | CHAMICAL | | A<br>C | | | | | | | | | N/A | LICHTENSTEIN, L.E. |
| 07/16/66 | 0532 | NASA 4.159 GG | UNITED STATES | WHITE SANDS | | | | | | | E<br>C | | | | 145 | STECHER, T.P. |
| 07/17/66 | 0056 | NASA 14.291 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 192 | BEDINGER, J.F. |
| 07/17/66 | 0210 | K-C9M-18<br>S-C5S-001 | JAPAN | KAGOSHIMA | | | C | | | C<br>D | | | | | 326 | TOHMATSU, T.<br>TSURUTA, H. |
| 07/17/66 | 0210 | K-C9M-18<br>S-C5S-002 | JAPAN | KAGOSHIMA | | | D | | | | | | | | 326 | FUGONO, N.<br>SHIRO, I.<br>MIYAZAKI, S.<br>KOSEKI, T.<br>NAGAYAMA, M.<br>UEDA, A.<br>SATO, O. |
| 07/17/66 | 0210 | K-C9M-18<br>S-C5S-003 | JAPAN | KAGOSHIMA | | | B | | | | | | | | 326 | AOYAMA, I.<br>TOYAMA, F. |
| 07/17/66 | 0210 | K-C9M-18<br>S-C5S-004 | JAPAN | KAGOSHIMA | | | | | | | G | | | | 326 | TAKEUCHI, H.<br>IMAI, T.<br>OTSUKA, Y.<br>OYA, K.<br>TSUTSUMI, M.<br>ANDO, T. |
| 07/17/66 | 0500 | NASA 14.292 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 211 | BEDINGER, J.F. |
| 07/17/66 | 0645 | NASA 14.293 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 199 | BEDINGER, J.F. |
| 07/17/66 | 0825 | NASA 14.294 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 200 | BEDINGER, J.F. |
| 07/17/66 | 0908 | NASA 14.295 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 208 | BEDINGER, J.F. |
| 07/19/66 | 0500 | AKF-3 -016 | CANADA | RESOLUTE BAY | | | C | | | F | | | | | 150 | WILSON, B.G.<br>MCNAMARA, A.G. |
| 07/19/66 | 0848 | HAD 187 | AUSTRALIA,<br>UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | N/A | UNKNOWN |
| 07/20/66 | 1701 | ESRO-B02 | ESRO<br>ITALY | SARDINIA | | | | X | X | | | | | | 65 | OCCHIALINI, G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/20/66 | 1950 | NASA 14.218 GE | UNITED STATES | FORT CHURCHILL | | | | | | | | | | C | N/A | DURGAPRASAD, N.<br>FICHTEL, C. |
| 07/21/66 | 0327 | AKF-3 -015 | CANADA | RESOLUTE BAY | | | C | A | | | | | | | 150 | WILSON, B.G.<br>MCNAMARA, A.G. |
| 07/22/66 | 2102 | AF 03.525 | UNITED STATES | WHITE SANDS | | | C | | | E | | | | | 256 | HINTEREGGER, H.E. |
| 07/23/66 | 0435 | L -C3H-D<br>S -C56-001 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 1800 | MIYAZAKI, S.<br>SHIRO, I.<br>FUGONO, N.<br>KOIZUMI, T.<br>NAGAYAMA, M.<br>UEDA, A. |
| 07/23/66 | 0635 | L -C3H-02<br>S -C56-002 | JAPAN | KAGOSHIMA | | | X | | | | | | | | 1800 | FUGONO, N.<br>SHIRO, I.<br>MIYAZAKI, S.<br>KOIZUMI, T.<br>AGAYAMA, M.<br>UEDA, A.<br>SATO, O. |
| 07/23/66 | 0635 | L -C3H-02<br>S -C56-003 | JAPAN | KAGOSHIMA | | | | | A | | | | | | 1800 | TAKEUCHI, H.<br>IMAI, T.<br>UTSUKA, Y.<br>OYA, K.<br>TSUTSUMI, M.<br>IWANAGA, M. |
| 07/23/66 | 0635 | L -C3H-02<br>S -C56-004 | JAPAN | KAGOSHIMA | | | | C | | | | | | | 1800 | TSUKUDA, M.<br>DOKE, T.<br>NAKAMOTO, J.<br>SASAKI, A. |
| 07/23/66 | 0635 | L -C3H-02<br>S -C56-005 | JAPAN | KAGOSHIMA | | F | | | | C<br>D | | | | | N/A | TOHMATSU, T.<br>OGAWA, T.<br>TSURUTA, H.<br>IWASAKA, Y. |
| 07/23/66 | 0635 | L -C3H-02<br>S -C56-006 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 1800 | OBAYASHI, T.<br>OYA, H.<br>YAMAKI, H.<br>YAMAMOTO. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/23/66 | 0635 | L -C3H-02<br>S -C56-009 | JAPAN | KAGOSHIMA | | | C<br>B | | | | | | | | 1800 | KIMURA, I. |
| 07/23/66 | 0635 | L -C3H-02<br>S -C56-007 | JAPAN | KAGOSHIMA | | | | | | E | | | | | N/A | HIGASHINO, I.<br>SASANUMA, M.<br>MASUOKA, T.<br>WATANABE, N.<br>HISADA, H.<br>KUBOI, T.<br>MATSUSHIMA, K. |
| 07/27/66 | 0635 | L -C3H-02<br>S -C56-008 | JAPAN | KAGOSHIMA | | | | | | E | | | | | 1800 | YAMAGUCHI, T.<br>URIMOTO, S.<br>OYAMA, M. |
| 07/27/66 | 1500 | NE 3.190 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 211 | GARRETT, D. L.<br>SNIDER, C. B.<br>BARTOE, J. D.<br>PURCELL, J. D. |
| 07/27/66 | 1605 | 0631 LANCE | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 08/01/66 | | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 08/01/66 | | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 08/02/66 | | NIKE-TOMAHAWK | UNITED STATES | BARKING SANDS | X | | | | | | | | | | 100 | UNKNOWN |
| 08/06/66 | | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | N/A | FAIRE, A. C. |
| 08/07/66 | 0700 | NASA 14.296 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 08/07/66 | 0705 | NASA 10.204 GM | UNITED STATES | NATAL | | Z<br>K | | | | | | | | | N/A | SMITH, W. S. |
| 08/07/66 | 0845 | PRL-20.005 | INDIA | THUMBA | | | B | | | | | | | | 175 | UNKNOWN |
| 08/07/66 | 0904 | NASA 10.202 GM | UNITED STATES | FORT CHURCHILL | | Z<br>K | | | | | | | | | N/A | SMITH, W. S. |
| 08/07/66 | 0949 | NASA 14.289 UM | UNITED STATES | FORT CHURCHILL | | K | | | | | | | | | N/A | HORVATH, J. J. |
| 08/07/66 | 1735 | NASA 10.203 GM | UNITED STATES | FORT CHURCHILL | | Z<br>K | | | | | | | | | N/A | SMITH, W. S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/07/66 | 2046 | NASA 10.206 GM | UNITED STATES | WALLOPS ISLAND | | Z<br>K | | | | | | | | | N/A | SMITH, W. S. |
| 08/07/66 | 2326 | NASA 10.205 GM | UNITED STATES | NATAL | | Z<br>K | | | | | | | | | N/A | SMITH, W. S. |
| 08/08/66 | 1920 | AE 03.734 | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | | 127 | FILZ, R. |
| 08/10/66 | 1237 | K -C9M-19 | JAPAN | KAGOSHIMA | | | C | | B | | | | | | 330 | KIMURA, I. |
| 08/10/66 | 1237 | K -C9M-19<br>S -C57-002 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 330 | KURAHASHI, K.<br>TOKUDA, S.<br>TSUCHIYA, T.<br>OUYAMA, M. |
| 08/10/66 | 1237 | K -C9M-19<br>S -C57-003 | JAPAN | KAGOSHIMA | C | | | | | | | | | | 330 | TANABE, H.<br>NAKAMURA, T.<br>ASHIDA, S. |
| 08/11/66 | 0209 | K -C8L-10<br>S -C58 | JAPAN | KAGOSHIMA | | V | | | | | | | | | 130 | KIMURAH, H.<br>OHCHI, N.<br>WATANABE, C. |
| 08/11/66 | 1732 | AC 03.364 | UNITED STATES | FORT CHURCHILL | | | | | | X | | | | | 207 | SILVERMAN, S. |
| 08/14/66 | 2035 | NASA 10.200 GM | UNITED STATES | POINT BARROW | | Z<br>K | | | | | | | | | N/A | SMITH, W. S. |
| 08/15/66 | 0908 | NASA 10.201 GM | UNITED STATES | POINT BARROW | | Z<br>K | | | | | | | | | N/A | SMITH, W. S. |
| 08/15/66 | 2135 | NASA 8.32 DA | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | | N/A | JOHNSON, C. Y. |
| 08/15/66 | 2135 | NASA 14.170 LA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 160 | HEMENWAY, C. L. |
| 08/17/66 | 0339 | VB-C8 | FED REP OF GERMANY | FORT CHURCHILL | B | | | | | | | | | | 365 | NEUSS, H. |
| 08/17/66 | 1430 | SUPARCO-029/66 | PAKISTAN | SONMIANI | | A | | | | | | | | | 62 | JAFRI, S. A. |
| 08/17/66 | 1630 | EXAMETNET-08 | ARGENTINA<br>UNITED STATES | CHAMICAL | | A<br>C | | | | | | | | | 194 | LICHTENSTEIN, L. E. |
| 08/17/66 | 1950 | NASA 17.02 GS | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 358 | CARTWRIGHT, D. J. |
| 08/19/66 | 0944 | VB-C9 | FED REP OF GERMANY | FORT CHURCHILL | B | | | | | | | | | | 365 | NEUSS, H. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/23/66 | 0904 | HAD 189 | AUSTRALIA UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | N/A | UNKNOWN |
| 08/24/66 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 08/24/66 | 2100 | NASA 14.183 UE | UNITED STATES | FORT CHURCHILL | E | | C | | | F | | | | | 157 | LOCKWOOD, J. A. |
| 08/24/66 | 2315 | NASA 14.271 UI | UNITED STATES | WALLOPS ISLAND | | | C E D | | | | | | | | 164 | SMITH, L. G. BOWHILL, S. A. |
| 08/25/66 | | CAJUN-DART | UNITED STATES | CAPE KENNEDY | | Y A | | | | | | | | | N/A | UNKNOWN |
| 08/25/66 | 0045 | NASA 14.272 UI | UNITED STATES | WALLOPS ISLAND | | | C E D | | | | | | | | 169 | SMITH, L. G. BOWHILL, S. A. |
| 08/26/66 | 1813 | NASA 4.101 DS | UNITED STATES | WALLOPS ISLAND | | | | | | E | | | | | 212 | HINTEREGGER, H. E. |
| 08/26/66 | 1831 | NASA 18.05 GA | UNITED STATES | WALLOPS ISLAND | | | C E D | | | | | | | | 287 | CARIGNAN, G. R. |
| 08/26/66 | 1851 | NASA 18.06 GA | UNITED STATES | WALLOPS ISLAND | | | C E D | | | | | | | | 308 | CARIGNAN, G. R. |
| 08/26/66 | 1911 | NASA 14.285 UM | UNITED STATES | WALLOPS ISLAND | | B C F | | | | | | | | | 149 | HORVATH, J. J. |
| 08/26/66 | 2030 | AAF-3 -013 | CANADA | FORT CHURCHILL | | | | | | | | | | A | 114 | MEYER, R. F. |
| 08/28/66 | 0423 | NASA 14.286 UM | UNITED STATES | WALLOPS ISLAND | | B C F | | | | | | | | | 151 | HORVATH, J. J. |
| 08/28/66 | 0700 | NASA 18.22 GA | UNITED STATES | WALLOPS ISLAND | | | C E D | | | | | | | | 301 | CARIGNAN, G. R. |
| 08/29/66 | 1238 | NASA 15.12 GI | UNITED STATES | WHITE SANDS | | | A C | | | | | | | | N/A | PEDERSON, A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/29/66 | 1337 | NASA 15.11 GI | UNITED STATES | WHITE SANDS | | | A C | | | | | | | | N/A | PEDERSON, A. |
| 08/29/66 | 1520 | NASA 4.156 GM | UNITED STATES | WHITE SANDS | C | | C E | | | D F | | | | | 206 | HEATH, D. F. |
| 09/01/66 | 1858 | NASA 18.18 UE | UNITED STATES CANADA | FORT CHURCHILL | | | | C | | F | | | | | 242 | CHASE, L. M.<br>LAMPTON, M.<br>CARLSON, C.<br>ALBERT, R. |
| 09/02/66 | 1600 | NASA 14.219 GE | UNITED STATES | FORT CHURCHILL | | | | C | | | | | | | N/A | DURGAPRASAD, N.<br>FICHTEL, C. |
| 09/02/66 | 2227 | NASA 14.220 GE | UNITED STATES | FORT CHURCHILL | | | | C | | | | | | | 159 | DURGAPRASAD, N.<br>FICHTEL, C. |
| 09/02/66 | 2250 | NA 3.182 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 206 | SLOAN, W. A. |
| 09/03/66 | 1724 | NASA 14.221 GE | UNITED STATES | FORT CHURCHILL | | | | C | | | | | | | 160 | DURGAPRASAD, N.<br>FICHTEL, C. |
| 09/06/66 | 1225 | NASA 18.20 UF | UNITED STATES | FORT CHURCHILL | | | | C | | F | | | | | 238 | CHASE, L. M.<br>LAMPTON, M.<br>CARLSON, C.<br>ALBERT, R. |
| 09/06/66 | 1804 | NASA 18.21 UE | UNITED STATES | FORT CHURCHILL | | | | C | | F | | | | | 243 | CHASE, L. M.<br>LAMPTON, M.<br>CARLSON, C.<br>ALBERT, R. |
| 09/08/66 | 1841 | EXAMETNET-09 | ARGENTINA<br>UNITED STATES | CHAMICAL | | A C | | | | | | | | | 60 | LICHTENSTEIN, L. E. |
| 09/14/66 | 0135 | NASA 14.278 CA<br>NASA 14.278 C | UNITED STATES | FORT CHURCHILL | | V | C E | | | | | | | | 161 | SMITH, L. G.<br>BEDINGER, J. F. |
| 09/14/66 | 0400 | NASA 14.279 CA<br>NASA 14.279 C | UNITED STATES | FORT CHURCHILL | | V | C E | | | | | | | | 186 | SMITH, L. G.<br>BEDINGER, J. F. |
| 09/14/66 | 1915 | EXAMETNET-10 | ARGENTINA<br>UNITED STATES | CHAMICAL | | A C | | | | | | | | | 61 | LICHTENSTEIN, L. E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/16/66 | 0122 | NASA 14.280 CA -CI | UNITED STATES | FORT CHURCHILL | | V | C E | | | | | | | | 185 | SMITH, L.G. BEDINGER, J.F. |
| 09/16/66 | 0300 | NASA 14.281 CA -CI | UNITED STATES | FORT CHURCHILL | | V | C E | | | | | | | | 185 | SMITH, L.G. BEDINGER, J.F. |
| 09/16/66 | 0417 | NASA 14.282 CA -CI | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 206 | SMITH, L.G. BEDINGER, J.F. |
| 09/16/66 | 1554 | NASA 14.164 UI | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 165 | BETTINGER, R.T. |
| 09/17/66 | 0253 | NASA 16.19 UE | UNITED STATES | FORT CHURCHILL | | G | D | D | | | | | | | 243 | CHASE, L.M. LAMPTON, M. CARLSON, C. ALBERT, R. |
| 09/20/66 | 0545 | NASA 4.176 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 165 | MORTON, D.C. |
| 09/21/66 | 1640 | EXAMETNET-11 | ARGENTINA UNITED STATES | CHAMICAL | | A C | | | | | | | | | 67 | LICHTENSTEIN, L.E. |
| 09/24/66 | 0913 | NASA 8.27 IA | UNITED STATES | WALLOPS ISLAND | | V | | | B | | | | | | 884 | NEUSS, H. |
| 09/24/66 | 1947 | MP-12 | USSR | KHEISA ISLAND | | B C F | | | | | | | | | 144 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/25/66 | 0951 | NASA 18.26 IA | UNITED STATES | WALLOPS ISLAND | | V | | | B | | | | | | 280 | NEUSS, H. |
| 09/27/66 | 0922 | HAD 190 | AUSTRALIA UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | N/A | UNKNOWN |
| 09/27/66 | 2037 | SA-I | UNITED KINGDOM | SOUTH UIST | | A C F | | | | | | | | | 59 | FRITH, R. |
| 09/28/66 | 1816 | AC 17.604D | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 127 | SANDOCK, J. |
| 09/30/66 | 0907 | MP-12 | USSR | KHEISA ISLAND | | B C F | | | | | | | | | 174 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/30/66 | 1835 | NASA 10.146 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 118 | SMITH, W.S. |
| 09/30/66 | 2350 | NASA 14.217 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 153 | SMITH, W.S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/01/66 | 0530 | NASA 10.209 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 115 | SMITH, W. S. |
| 10/01/66 | 0820 | NASA 10.211 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 10/01/66 | 0907 | MP-12 | USSR | KHEISA ISLAND | | G | | | | | | | | | 174 | UNKNOWN |
| 10/01/66 | 1127 | NASA 10.210 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 126 | SMITH, W. S. |
| 10/01/66 | 2039 | NASA 10.212 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 10/02/66 | 0220 | NASA 10.213 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 10/02/66 | 0820 | NASA 10.214 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 10/02/66 | 1409 | NASA 10.215 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 10/04/66 | 2029 | NA 3.160 | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 154 | UNZICKER, A. E.<br>ELWERT, G. |
| 10/06/66 | 2029 | NASA 8.38 GI | UNITED STATES | WALLOPS ISLAND | | | C<br>E<br>D | | | | | | | | 650 | BARRINGTON, R. E. |
| 10/10/66 | 0715 | GEOPHYSICAL | USSR | | | | E<br>B | | | D<br>F | | | | | N/A | UNKNOWN |
| 10/10/66 | 1657 | AF 07.348 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 192 | FAUCHER, A. G. |
| 10/11/66 | 2322 | | UNITED STATES | WHITE SANDS | | | | | | F<br>E | | | | | N/A | UNKNOWN |
| 10/12/66 | 0152 | NASA 4.149 CG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 144 | GURSKY, H. |
| 10/13/66 | 0225 | MT-135-19<br>T-051 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 44 | ARIZUMI, N.<br>SUZUKI, S.<br>KOBANE, S. |
| 10/13/66 | 0420 | MT-135-A-020<br>T-052 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 65 | ARIZUMI, N.<br>SUZUKI, S.<br>KOBANE, S. |
| 10/13/66 | 2330 | EXAMETNET-12 | ARGENTINA<br>UNITED STATES | CHAMICAL | | A | | | | | | | | | 70 | LICHTENSTEIN, L. E. |
| 10/14/66 | 1720 | AE 07.813 | UNITED STATES | EGLIN AFB. | | | X | | | | | | | | 159 | HARRISON, R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/17/66 | | | FRANCE | ANDOYA | | Y | B | | | | | | | | N/A | UNKNOWN |
| 10/18/66 | 0917 | K -CEL-11<br>S -CSB | JAPAN | KAGOSHIMA | | V | | | | | | | | | 150 | KIMURA,H.<br>ICHIKAWA,T.<br>WATANABE,C. |
| 10/20/66 | 0200 | K -CE -14<br>S -CS9-003 | JAPAN | KAGOSHIMA | | | | | B | | | | | | 191 | FUGONO,N.<br>MIYAZAKI,S.<br>MIMURA,H.<br>ABIKO,K.<br>MATSUZAWA,T. |
| 10/20/66 | 0220 | K -CE -14<br>S -CS9-001 | JAPAN | KAGOSHIMA | | | B | | | | | | | | 191 | AOYAMA,I.<br>TOYAMA,F. |
| 10/20/66 | 0225 | K -C8 -14<br>S -CS9-002 | JAPAN | KAGOSHIMA | | | | | | D | | | | | 191 | TOHMATSU,T.<br>TSURUTA H. |
| 10/20/66 | 0225 | K -SM -20<br>S-60 | JAPAN | KAGOSHIMA | X | X | X | X | X | | | | | | 353 | NAGATA,T.<br>HIRAO,K.<br>OYA,H. |
| 10/20/66 | 0825 | K -CSM-20<br>S -CE0-001 | JAPAN | KAGOSHIMA | C | | | | | | | | | | 353 | TOHMATSU,T.<br>OGAWA,T. |
| 10/20/66 | 0825 | K -CSM-20<br>S -CE0-002 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 353 | MIYAZAKI,S.<br>FUGONO,N.<br>SUITZ,T.<br>SUGIUCHI,H.<br>OYAMA,K.<br>MIMURA,N.<br>MATSUZAWA,T. |
| 10/20/66 | 0825 | K -CSM-20<br>S -CE0-003 | JAPAN | KAGOSHIMA | | | C | | B | | | | | | 353 | OBAYASHI,T.<br>OYA,H.<br>OKAZAKI,A.<br>ASAHINA,T. |
| 10/20/66 | 1238 | MP-12 | USSR | KHEISA ISLAND | | B<br>C<br>F | | | | | | | | | 186 | CENTRAL AERCLOG-ICAL OBSERVATORY |
| 10/22/66 | | LUSTER 1966 | ISRAEL | | | | | | | | | A | | | 140 | UNKNOWN |
| 10/22/66 | 1520 | NASA 4.161 NA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 149 | FARLOW,N.H. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/25/66 | 0906 | SL-321 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | X | | | | | | | | | 211 | WILSON,R. |
| 10/25/66 | 1111 | SL-322 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | X | | | | | | | | | 119 | WILSON,R. |
| 10/25/66 | 1725 | NASA 4.195 GA | UNITED STATES | WHITE SANDS | | | C | | | | | A | | | 186 | BERG,O.E.<br>MCDONNELL,T.<br>AIKIN,A.C. |
| 10/25/66 | 1810 | NASA 10.181 AI | UNITED STATES | WHITE SANDS | | | C | | | | | A | | | 119 | WHIPPLE,E.C. |
| 10/26/66 | 1416 | MP-12 | USSR | KHEISA ISLAND | | B<br>C<br>F | | | | | | | | | 176 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/27/66 | 0847 | SL-324S | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | X | | | | | | | | | 173 | WILSON,R. |
| 10/27/66 | 1025 | SL-323 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | X | | | | | | | | | 212 | WILSON,R. |
| 10/27/66 | 1335 | SL-324 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | X | | | | | | | | | N/A | WILSON,R. |
| 10/30/66 | 1406 | AC 06.710 | UNITED STATES | EGLIN AFB | | | | D | | | | | | | 95 | TOOLIN,R. |
| 11/01/66 | 0948 | HAD 191 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | Y | | | | | | | | | N/A | UNKNOWN |
| 11/04/66 | 1516 | MP-12 | USSR | KHEISA ISLAND | | B<br>C<br>F | | | | | | | | | 164 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/05/66 | 1455 | NIKE-HYDAC | BRAZIL<br>UNITED STATES | CASSINO | | | C | | | | | | | | 96 | NARCISSI,R.S. |
| 11/08/66 | 1732 | NASA 18.04 GE | UNITED STATES | WALLOPS ISLAND | | | B | | B | | | | | | 216 | AGGSON,T.L.<br>HEPPNER,J.P. |
| 11/10/66 | 2235 | LONG TOM ROCKE | UNITED KINGDOM | WOOMERA | | | | | | D | | | | | N/A | UNKNOWN |
| 11/11/66 | 0433 | NASA 14.287 IE | UNITED STATES | FORT CHURCHILL | | | | | | | | | | | 193 | KEPPLER,E.<br>MUSMANN,G.<br>ROSBACH |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/12/66 | 1040 | NASA 4.191 DS | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 174 | KOOMEN, M. J.<br>PURCELL, J. D. |
| 11/12/66 | 1200 | UNKNOWN 010772 | BRAZIL<br>UNITED STATES | CASSINO | | | | | | X | | | | | 250 | UNKNOWN |
| 11/12/66 | 1338 | UNKNOWN 010772 | BRAZIL<br>UNITED STATES | CASSINO | | | X | | | | | | | | 85 | UNKNOWN |
| 11/12/66 | 1342 | | FRANCE | | | | | | | | D | | | | N/A | NATIONAL CENTER FOR SCIENTIFIC RES |
| 11/12/66 | 1354 | UNKNOWN 010772 | BRAZIL<br>UNITED STATES | CASSINO | | | X | | | X | | | | | 115 | UNKNOWN |
| 11/12/66 | 1401 | NASA 14.77 CA | UNITED STATES | CASSINO | | V | C<br>E | | | | | | | | 185 | SMITH, L. G.<br>BEDINGER, J. F. |
| 11/12/66 | 1405 | NASA 14.274 UI | UNITED STATES | CASSINO | | | C<br>E<br>A | | | | D | | | | 197 | BOWHILL, S. A.<br>SMITH, L. G. |
| 11/12/66 | 1407 | NASA 14.302 UI | UNITED STATES | CASSINO | | | C<br>E<br>A | | | | D | | | | 160 | BOWHILL, S. A.<br>SMITH, L. G.<br>DE MENDONCA, F. |
| 11/12/66 | 1410 | NASA 14.304 UI | UNITED STATES | CASSINO | | | C<br>E<br>A | | | | D | | | | 195 | BOWHILL, S. A.<br>SMITH, L. G. |
| 11/12/66 | 1429 | UNKNOWN 010772 | BRAZIL<br>UNITED STATES | CASSINO | | | X | | | X | | | | | 115 | UNKNOWN |
| 11/12/66 | 1445 | UNKNOWN 010772 | BRAZIL<br>UNITED STATES | CASSINO | | | | | | X | | | | | 250 | UNKNOWN |
| 11/12/66 | 1450 | UNKNOWN 010772 | BRAZIL<br>UNITED STATES | CASSINO | | | X | | | | | | | | 85 | UNKNOWN |
| 11/12/66 | 1455 | D-004 | BRAZIL<br>UNITED STATES | CASSINO | | | C | | | | | | | | 115 | NARCISSI, R. S. |
| 11/12/66 | 1508 | D-011 | BRAZIL<br>UNITED STATES | CASSINO | | | C | | | | | | | | 115 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/12/66 | 1522 | D-013 | BRAZIL<br>UNITED STATES | CASSINO | | | C | | | | | | | | 115 | UNKNOWN |
| 11/12/66 | 1535 | UNKNOWN 010772 | BRAZIL<br>UNITED STATES | CASSINO | | | X | | | | | | | | 85 | UNKNOWN |
| 11/12/66 | 1600 | NASA 14.303 UI | UNITED STATES | CASSINO | | | C<br>E<br>A | | | | D | | | | 200 | BOWHILL, S. A.<br>SMITH, L. G. |
| 11/12/66 | 1615 | NASA 4.153 GS | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 151 | UNDERWOOD, J. H. |
| 11/12/66 | 1640 | ND 3.188 | UNITED STATES | WHITE SANDS | | | | | | C<br>E | | | | | 175 | KOOMEN, M. J.<br>PURCELL, J. D. |
| 11/15/66 | 1355 | NIKE-HYDAC | UNITED STATES | CASSINO | | | | | | X | | | | | N/A | UNKNOWN |
| 11/16/66 | 1401 | SUPARCO-032/66 | PAKISTAN<br>UNITED STATES | SONMIANI | | A | | | | | | | | | 64 | PURCELL, J. D.<br>JAFRI, S. A. |
| 11/16/66 | 1530 | EXAMETNET-13 | ARGENTINA<br>UNITED STATES | TARTAGUL | | A<br>C | | | | | | | | | 61 | LICHTENSTEIN, L. S. |
| 11/17/66 | 0141 | Y-10 | UNITED STATES | YUMA | | V | | | | | | | | | 112 | UNKNOWN |
| 11/17/66 | 0241 | Y-11 | UNITED STATES | YUMA | | V | | | | | | | | | 119 | UNKNOWN |
| 11/17/66 | 0532 | Y-12 | UNITED STATES | YUMA | | V | | | | | | | | | 112 | UNKNOWN |
| 11/17/66 | 0716 | Y-13 | UNITED STATES | YUMA | | V | | | | | | | | | 120 | UNKNOWN |
| 11/18/66 | 1644 | | UNITED STATES | HAMMAGUIR | | V | | | | | | | | | N/A | UNKNOWN |
| 11/18/66 | 2215 | NASA 14.299 UA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 161 | HEMENWAY, C. L. |
| 11/19/66 | 0010 | AAD-2 -106 | CANADA | FORT CHURCHILL | B | | C | | B | | | A | | | 144 | MCNAMARA, A. G.<br>SHEPHERD, G. G.<br>KAVADAS, A.<br>WLOCHOWICZ R.<br>ANGER, C. D.<br>WHALEN, B. A. |
| 11/19/66 | 0118 | Y-14 | UNITED STATES | YUMA | | V | | | | | | | | | 120 | UNKNOWN |
| 11/19/66 | 0212 | Y-15 | UNITED STATES | YUMA | | V | | | | | | | | | 127 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/19/66 | 0449 | Y-16 | UNITED STATES | YUMA | | V | | | | | | | | | 139 | UNKNOWN |
| 11/19/66 | 0643 | Y-17 | UNITED STATES | YUMA | | V | | | | | | | | | 138 | UNKNOWN |
| 11/19/66 | 0801 | Y-18 | UNITED STATES | YUMA | | V | | | | | | | | | 144 | UNKNOWN |
| 11/19/66 | 0935 | Y-19 | UNITED STATES | YUMA | | V | | | | | | | | | 120 | UNKNOWN |
| 11/19/66 | 1152 | Y-20 | UNITED STATES | YUMA | | V | | | | | | | | | 167 | UNKNOWN |
| 11/19/66 | 1644 | | UNITED STATES | HAMMAGUIR | | V | | | | | | | | | N/A | UNKNOWN |
| 11/20/66 | 0245 | Y-21 | UNITED STATES | YUMA | | V | | | | | | | | | 142 | UNKNOWN |
| 11/20/66 | 0421 | Y-22 | UNITED STATES | YUMA | | V | | | | | | | | | 111 | UNKNOWN |
| 11/20/66 | 0537 | Y-23 | UNITED STATES | YUMA | | V | | | | | | | | | 111 | UNKNOWN |
| 11/20/66 | 0659 | Y-24 | UNITED STATES | YUMA | | V | | | | | | | | | 147 | UNKNOWN |
| 11/20/66 | 1653 | | UNITED STATES | | | V | | | | | | | | | N/A | UNKNOWN |
| 11/21/66 | 1000 | NASA 4.154 GG | UNITED STATES | WHITE SANDS | | | | | | | E D | | | | 165 | STECHER, T.P. |
| 11/23/66 | 2144 | MP-12 | USSR | KHEISA ISLAND | | B C E | | | | | | | | | 165 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/26/66 | 1911 | ISRC-SK-016 | ESRO ITALY UNITED KINGDOM | SARDINIA | | | | | | X | | | | | 3 | BUTLER, H.E. |
| 11/27/66 | 0216 | AG 03.257 | UNITED STATES | FORT CHURCHILL | | | | | | B | | | | | 192 | SALISBURY, J.W. |
| 11/29/66 | | ESRO C9/011 | FED REP OF GERMANY | KIRUNA | | | C | | | | | | | | N/A | UNKNOWN |
| 11/29/66 | 0106 | CE-008 | ESRO FED REP OF GERMANY SWEDEN UNITED KINGDOM | KIRUNA | | | X | | | | | | | | 147 | RAWER, K. BOYD, R.L.F. PETERSEN, C.E. |
| 11/29/66 | 0601 | AAF-3 -012 | CANADA | FORT CHURCHILL | | | | X | X | | | | | | 114 | BUDZINSKI, E.E. MCNAMARA, A.G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/29/66 | 0608 | AAF-4 -005 | CANADA | FORT CHURCHILL | | | | X | X | | | | | | 800 | MCNAMARA, A.G.<br>BUDZINSKI, E.E. |
| 11/30/66 | | ESROC09/001 | FED REP OF GERMANY | KIRUNA | | | C | | | | | | | | N/A | UNKNOWN |
| 11/30/66 | 1145 | NASA 4.181 UA | UNITED STATES | WHITE SANDS | | G | E | | | | | | | | 219 | NIER, A.O.C. |
| 11/30/66 | 1906 | NASA 18.27 UE | UNITED STATES | WALLOPS ISLAND | | | C<br>A | | | | F | | | | 359 | LOCKWOOD, J.A. |
| 11/30/66 | 2204 | CE-007 | ESRO<br>DENMARK<br>FED REP OF GERMANY<br>UNITED KINGDOM | WALLOPS ISLAND | | | | | | | | X | | | 145 | RAWER, K.<br>BOYD, R.L.F.<br>PETERSEN, O.E. |
| 12/01/66 | 2040 | MP-12 | USSR | KHEISA ISLAND | | B<br>C<br>F | | | | | | | | | 168 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/02/66 | 2109 | NASA 4.180 UA | UNITED STATES | WHITE SANDS | | G | C | | | | F | | | | 227 | NIER, A.O.C. |
| 12/05/66 | 0200 | K -C9M-21<br>S -C61-001 | JAPAN | KAGOSHIMA | | F | | | | D | | | | | 326 | TOHMATSU, T.<br>TSURUTA, H. |
| 12/05/66 | 0200 | K -C9M-21<br>S -C61-002 | JAPAN | KAGOSHIMA | | F | | | | D<br>E | | | | | 326 | TOHMATSU, T.<br>OGAWA, T.<br>IWASAKA, Y. |
| 12/05/66 | 0200 | K -C9M-21<br>S -C61-003 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 326 | OBAYASHI, T.<br>OYA, H.<br>URIMOTO, S.<br>YAMAKI, H. |
| 12/06/66 | 0335 | AE 03.724 | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 208 | CUNNIFF, C. |
| 12/06/66 | 0839 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 167 | INST OF EXPERIMENTAL METEOROLOGY |
| 12/08/66 | 1457 | SL-4C5 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | | | | | | X | | | | N/A | WILSON, R.<br>POUNDS, K.A. |
| 12/09/66 | 1100 | NASA 10.160 GM | UNITED STATES | WHITE SANDS | | G | | | | | | | | | N/A | HILSENRATH, E. |
| 12/10/66 | 0200 | K -C6L-12<br>S -C62-002 | JAPAN | KAGOSHIMA | | G | B | | | D | | | | | 147 | TOHMATSU, T.<br>TSURUTA H. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/10/66 | 0242 | | UNITED STATES | WALLOPS ISLAND | | A C | | | | | | | | | N/A | UNKNOWN |
| 12/10/66 | 0337 | | UNITED STATES | ANTIGUA | | A C | | | | | | | | | N/A | UNKNOWN |
| 12/10/66 | 0352 | | UNITED STATES | WALLOPS ISLAND | | A C | | | | | | | | | N/A | UNKNOWN |
| 12/10/66 | 0400 | | UNITED STATES | WHITE SANDS | | A C | | | | | | | | | N/A | UNKNOWN |
| 12/10/66 | 0628 | | UNITED STATES | EGLIN AFB | | A C | | | | | | | | | N/A | UNKNOWN |
| 12/10/66 | 0630 | | UNITED STATES | FORT SHERMAN | | A C | | | | | | | | | N/A | UNKNOWN |
| 12/10/66 | 0900 | | UNITED STATES | FORT CHURCHILL | | A C | | | | | | | | | N/A | UNKNOWN |
| 12/10/66 | 1130 | K -1C -02 S -C63-001 | JAPAN | KAGOSHIMA | | F | | | | D | | | | | 253 | TANABE,H. NAKAMURA,T. ASHIDA,S. |
| 12/10/66 | 1130 | K -1C -02 S -C63-002 S -063-003 | JAPAN | KAGOSHIMA | E | | | | | | C | | | | 253 | MATSUOKA,M. OGAWARA,Y. HAYAKAWA,S. WADA,M. |
| 12/10/66 | 1130 | K -1C -02 S -C63-004 | JAPAN | KAGOSHIMA | | | B | | | | | | | | 253 | TAKEUCHI,H. IMAI,T. UEDA,R. GOTOH,E. NAKAI,K. HAGIWARA,K. IWASAKI,S. |
| 12/12/66 | 1739 | MP-12 | USSR | KAPUSTIN YAR | | G | D | | | | | | | | 160 | INST OF EXPERI-MENTAL METEOROLOGY |
| 12/12/66 | 1906 | | CANADA | FORT CHURCHILL | | | | | | | | | | | 155 | UNKNOWN |
| 12/12/66 | 2020 | BLACK BRANT 3 | CANADA, FED REP OF GERMANY | FORT CHURCHILL | | | C D | | | | | | | | 155 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/13/66 | 0630 | NASA 4.182 UG | UNITED STATES | NATAL | | | | | | | F | | | | 169 | BOWYER,C.S. |
| 12/13/66 | 0837 | AAF-EA-107 | CANADA | FORT CHURCHILL | B | | C<br>E | | | | | A | | | 48 | MCNAMARA,A.G.<br>WILSON,B.G.<br>ANGER,C.D.<br>FORSYTH,P.A.<br>WLOCHOWICZ,R. |
| 12/14/66 | 0730 | | USSR | KAPUSTIN YAR | | G | | | | | | | | | 100 | UNKNOWN |
| 12/14/66 | 0816 | AC 15.735 | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 224 | SANDOCK,J. |
| 12/14/66 | 0816 | AF 03.615 | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 192 | SANDOCK,J. |
| 12/14/66 | 1130 | NB 3.194 | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 177 | BYRAM,E.T. |
| 12/14/66 | 1407 | EXAMETNET-14 | ARGENTINA<br>UNITED STATES | CHAMICAL | | A<br>C | | | | | | | | | 60 | LICHTENSTEIN,L.E. |
| 12/14/66 | 2025 | EXAMETNET-15 | ARGENTINA<br>UNITED STATES | CHAMICAL | | A<br>C | | | | | | | | | N/A | LICHTENSTEIN,L.E. |
| 12/15/66 | 2012 | | USSR | VOLGOGRAD | | G | | | | | | | | | N/A | UNKNOWN |
| 12/20/66 | 1600 | MP-12 | USSR | KAPUSTIN YAR | | G | D | | | | | | | | 178 | INST OF EXPERIMENTAL METECROLOGY |
| 12/21/66 | 1230 | MP-12 | USSR | KAPUSTIN YAR | | B<br>F<br>C | | | | | | | | | 166 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/21/66 | 1230 | MP-12 | USSR | VOLGOGRAD | | | | | | F | | | | | 167 | INST OF EXPERIMENTAL METECROLOGY |
| 01/13/67 | 1000 | VERONIQUE | FRANCE | HAMMAGUIR | | | | | | D | | | | | 140 | UNKNOWN |
| 01/16/67 | 1148 | AF 07.654 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG,N.W. |
| 01/16/67 | 2348 | AF 07.503 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG,N.W. |
| 01/16/67 | 2400 | AF 07.653 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | ROSENBERG,N.W. |
| 01/17/67 | 1800 | AG 03.526 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | N/A | HINTEREGGER,H.E. |
| 01/18/67 | 1415 | EXAMETNET-16 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 68 | LICHTENSTEIN,L.E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/19/67 | 0200 | MT-135-21<br>T-C63 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | N/A | ARIZUMI, N.<br>SUZUKI, S.<br>KOBANE, S. |
| 01/21/67 | 0638 | AAA-2-105 | CANADA | FORT CHURCHILL | B | | C | D | | | | A | | | 170 | WLOCHOWICZ, R.<br>ANGER, C. D.<br>WILSON, B. G.<br>MCNAMARA, A. G. |
| 01/22/67 | 0200 | MT-135-22<br>T-C64 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 63 | ARIZUMI, N.<br>SUZUKI, S.<br>KOBANE, S. |
| 01/22/67 | 0500 | MT-135-23<br>T-C65 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 62 | ARIZUMI, N.<br>SUZUKI, S.<br>KOBANE, S. |
| 01/22/67 | 1856 | AAA-2-102 | CANADA | FORT CHURCHILL | B | | C | | | | | A | | | N/A | JONES, V.<br>MCNAMARA, A. G.<br>WLOCHOWICZ, R.<br>STANIFORTH, A. |
| 01/23/67 | 0700 | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | 90 | UNKNOWN |
| 01/23/67 | 1000 | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | 108 | UNKNOWN |
| 01/23/67 | 1300 | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | 82 | UNKNOWN |
| 01/23/67 | 1925 | NIKE-APACHE | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | 108 | UNKNOWN |
| 01/24/67 | 0200 | MT-135-25<br>T-C67 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 59 | ARIZUMI, N.<br>SUZUKI, S.<br>KOBANE, S. |
| 01/24/67 | 1151 | ETR-1828 | UNITED STATES | CAPE KENNEDY | | G | C<br>E | | | | | | | | 283 | UNKNOWN |
| 01/25/67 | 0300 | ETR-C651 | UNITED STATES | CAPE KENNEDY | | G | E<br>C | | | | | | | | 284 | UNKNOWN |
| 01/28/67 | 0516 | NASA 18.23 GE | UNITED STATES | FORT CHURCHILL | B | | | B | B | | | | | | 204 | EVANS, D. S.<br>AGGSON, T. |
| 01/28/67 | 1205 | D-025 | FRANCE | DUMONT D'URVILLE | | | C | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/29/67 | 0120 | D-026 | FRANCE | DUMONT D'URVILLE | | | C | | | | | | | | N/A | UNKNOWN |
| 01/31/67 | 0205 | K -C9M-22<br>S -C64-001 | JAPAN | KAGOSHIMA | | | | | | A | | | | | 327 | YAMAGUCHI, T.<br>URIMOTO, S.<br>OUYAMA, M. |
| 01/31/67 | 0205 | K -C9M-22<br>S -C64-002 | JAPAN | KAGOSHIMA | | | | | | A | | | | | 310 | ICHINOSE, T.<br>SAKURAI, T.<br>KONDO, S. |
| 01/31/67 | 0205 | K -C9M-22<br>S -C64-003 | JAPAN | KAGOSHIMA | | | E<br>C | | | | | | | | 327 | KAWASHIMA, N.<br>OYAMA, K.<br>SATO, O.<br>UYEDA, A. |
| 01/31/67 | 1850 | NASA 14.275 UI | UNITED STATES | WALLOPS ISLAND | | | A<br>B<br>E | | | | | | | | 195 | BOWHILL, S. A.<br>MECHTLY, E. A. |
| 01/31/67 | 1911 | NASA 10.207 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 110 | SMITH, W. S. |
| 01/31/67 | 2257 | MP-12 | USSR | KHEISA ISLAND | | G | | | | | | | | | 172 | UNKNOWN |
| 01/31/67 | 2317 | NASA 14.319 UM | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 127 | HORVATH, J. J. |
| 01/31/67 | 2320 | NASA 14.310 CM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 154 | BEDINGER, J. F. |
| 01/31/67 | 2348 | NASA 10.216 GM | UNITED STATES | POINT BARROW | | V<br>Z | | | | | | | | | 126 | SMITH, W. S. |
| 02/01/67 | 0112 | NASA 14.311 CM | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 154 | BEDINGER, J. F. |
| 02/01/67 | 0141 | NASA 10.217 GM | UNITED STATES | POINT BARROW | | V | | | | | | | | | 126 | SMITH, W. S. |
| 02/01/67 | 0346 | NASA 14.317 UM | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 152 | HORVATH, J. J. |
| 02/01/67 | 0349 | NASA 14.312 CM | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 154 | BEDINGER, J. F. |
| 02/01/67 | 0418 | NASA 10.218 GM | UNITED STATES | POINT BARROW | | V | | | | | | | | | 126 | SMITH, W. S. |
| 02/01/67 | 0541 | NASA 14.313 CM | UNITED STATES | FORT CHURCHILL | | V<br>Z | | | | | | | | | 154 | BEDINGER, J. F. |
| 02/01/67 | 0741 | NASA 10.219 GM | UNITED STATES | POINT BARROW | | V<br>Z | | | | | | | | | 126 | SMITH, W. S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/01/67 | 0826 | NASA 14.316 UM | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 159 | HORVATH, J. J. |
| 02/01/67 | 0829 | NASA 14.323 CM | UNITED STATES | FORT CHURCHILL | | V<br>Z | | | | | | | | | 154 | BEDINGER, J. F. |
| 02/01/67 | 0956 | NASA 10.220 GM | UNITED STATES | POINT BARROW | | V<br>Z | | | | | | | | | 126 | SMITH, W. S. |
| 02/01/67 | 1124 | NASA 14.314 CM | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 154 | BEDINGER, J. F. |
| 02/01/67 | 1158 | NASA 14.322 UM | UNITED STATES | FORT CHURCHILL | | V<br>Z | | | | | | | | | 152 | HORVATH, J. J. |
| 02/01/67 | 1426 | NASA 10.221 GM | UNITED STATES | POINT BARROW | | V<br>Z | | | | | | | | | 126 | SMITH, W. S. |
| 02/01/67 | 6538 | NASA 14.318 UM | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 164 | HORVATH, J. J. |
| 02/03/67 | | | USSR | KAPUSTIN YAR | | | | | | X | | | | | N/A | UNKNOWN |
| 02/03/67 | 1752 | NASA 10.222 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 112 | SMITH, W. S. |
| 02/04/67 | 0521 | AAA-2 -101 | CANADA | FORT CHURCHILL | B | | C | | | | | A | | | 183 | WILSON, B. G.<br>WLOCHOWICZ, P. |
| 02/04/67 | 2353 | ESRO | NETHERLANDS INTERNATIONAL | KIRUNA | B | | | | | | | | | | 120 | UNKNOWN |
| 02/04/67 | 2354 | CE-C22 | SWEDEN | KIRUNA | B | | | | | F | | | | | 128 | DE JAGER, C.<br>MONFILS, A. |
| 02/06/67 | 0210 | L -C3H-03<br>S -C6S-001 | JAPAN | KAGOSHIMA | | | | C | | | | | | | 2150 | TAKEUCHI, H.<br>IMAI, T.<br>IWASAKI, S.<br>IWAMI, T.<br>OKADA, T. |
| 02/06/67 | 1110 | L -C3H-03<br>S -C6S-003 | JAPAN | KAGOSHIMA | | | | A | | | F | | | | N/A | MATSUOKA, M.<br>OGAWARA, Y.<br>HAYAKAWA, S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/06/67 | 1110 | L -C3H-03<br>S -C6S-004 | JAPAN | KAGOSHIMA | | | | | | E | | | | | N/A | HIGASHINO,I.<br>SASANUMA,M.<br>MASUOKA,T.<br>WATANABE,N.<br>MATSUSHIMA,K. |
| 02/06/67 | 1110 | L -C3H-03<br>S -C6S-005 | JAPAN | KAGOSHIMA | | | | | | A | | | | | 2150 | TSUCHIYA,A.<br>URIMOTO,S.<br>AKUTAGAWA,M. |
| 02/06/67 | 1110 | L -C3H-03<br>S -C6S-007 | JAPAN | KAGOSHIMA | | | A<br>B | | | | | | | | 2150 | YABUZAKI,T.<br>FUJIOKA,N.<br>KONDO,S. |
| 02/06/67 | 1110 | L -C3H-03<br>S -C6S-008 | JAPAN | KAGOSHIMA | | | E | | | | | | | | 430 | OYAMA,K.<br>SATO,O.<br>UYEDA,A. |
| 02/06/67 | 1900 | L -C3H-03<br>S -C6S-006 | JAPAN | KAGOSHIMA | | | | | | A | | | | | 2150 | YAMAGUCHI,T.<br>URIMOTO,S.<br>OUYAMA,M. |
| 02/09/67 | 0616 | NASA 8.41 UE | UNITED STATES | FORT CHURCHILL | B | | X | | | | | | | | 752 | O'BRIEN,B.J. |
| 02/14/67 | 1714 | AEROBEE 150A | UNITED STATES | WALLOPS ISLAND | | | | | | E | | | | | N/A | UNKNOWN |
| 02/15/67 | 1401 | EXAMETNET-17 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 68 | LICHTENSTEIN,L.E. |
| 02/16/67 | 0737 | CE-C09 | SWEDEN | KIRUNA | | | A<br>E | | | | | | | | 148 | BOYD,R.L.F.<br>PETERSON,O.E. |
| 02/17/67 | 0418 | NASA 4.163 UA | UNITED STATES | FORT CHURCHILL | B | | A | | | | | | | | 160 | FASTIE,W.G. |
| 02/22/67 | 0712 | CE-C10 | SWEDEN | KIRUNA | | | A<br>E | | | | | | | | 145 | BOYD,R.L.F.<br>PETERSON,O.E. |
| 02/25/67 | 0235 | NASA 16.05 US | UNITED STATES | WALLOPS ISLAND | | | | | | A | A | | | | 2380 | HUGUENIN,G. |
| 03/03/67 | 0002 | F-14 | INTERNATIONAL<br>SWEDEN<br>UNITED STATES | ANDOYA | | | X | X | | | | | | | N/A | RIEDLER,W.W. |
| 03/03/67 | 0330 | NASA 4.160 GG | UNITED STATES | WHITE SANDS | | | | | | | E<br>D | | | | 157 | STECHER,T.P. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/03/67 | 0420 | NASA 4.84 UG | UNITED STATES | WHITE SANDS | | | | | | | B | | | | 158 | HARWIT,M. |
| 03/04/67 | 2104 | AF C7.582 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 206 | FAUCHER,A.G. |
| 03/05/67 | 2100 | | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | N/A | UNKNOWN |
| 03/06/67 | 0205 | AF C7.583 | UNITED STATES | EGLIN AFB | | | | | | | C | | | | 175 | FAUCHER,A.G. |
| 03/07/67 | 1100 | K -1C -03<br>S -C66-001 | JAPAN | KAGOSHIMA | | | | | | | C | | | | 248 | TANABE,H.<br>SAITO,K.<br>ASHIDA,S. |
| 03/07/67 | 1100 | K -1C -03<br>S -C66-002 | JAPAN | KAGOSHIMA | | | | | A | | | | | | 248 | TAKEUCHI,H.<br>IMAI,T.<br>UEDA,R.<br>HAGIWARA,K.<br>IWASAKI,T. |
| 03/07/67 | 1100 | K -1C -03<br>S -C66-003 | JAPAN | KAGOSHIMA | | | | | | | | | | C | 248 | OGAWARA,Y.<br>MATSUOKA,M. |
| 03/07/67 | 2000 | K-C10-03 | JAPAN | KAGOSHIMA | | | X | X | X | | | | | | 248 | HURUHATA,M.<br>MIYAZAKI,Y.<br>ODA,M.<br>HAYAKAWA,S. |
| 03/09/67 | 0507 | NASA 18.24 GE | UNITED STATES | FORT CHURCHILL | B | | | X | B | | | | | | N/A | EVANS,D.S.<br>AGGSON,T. |
| 03/12/67 | 1327 | NASA 14.163 IA -II | UNITED STATES | THUMBA | | | X | | | | | | | | 155 | BHAVSAR,P.D.<br>PRAKASH,S. |
| 03/12/67 | 1700 | NASA 14.206 IA -II | UNITED STATES<br>PAKISTAN | THUMBA | | V | C | | | | | | | | 183 | BHAVSAR,P.D.<br>PRAKASH,S. |
| 03/13/67 | 0014 | NASA 14.267 IA | UNITED STATES | THUMBA | | | X | | | | | | | | 155 | BHAVSAR,P.D.<br>PRAKASH,S. |
| 03/14/67 | | FERDINAD-015 | UNITED STATES<br>NORWAY | ANDOYA | | | X | | | | | | | | N/A | KANE,J.A. |
| 03/14/67 | 0600 | SL-4C6 | UNITED KINGDOM<br>AUSTRALIA | WOOMERA | | | | | | X | | | | | 200 | WILSON,R.<br>POUNDS,K.A.<br>STEWART,K.H. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/14/67 | 1714 | NASA 4.102 DS | UNITED STATES | WALLOPS ISLAND | | | | | | D E | | | | | 205 | HINTEREGGER, H. E. |
| 03/14/67 | 2346 | F-15 | INTERNATIONAL UNITED STATES SWEDEN | ANDOYA | | | X | X | | | | | | | 188 | UNKNOWN |
| 03/16/67 | 1548 | NB 3.191 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 193 | CARRUTHERS, G. R. |
| 03/16/67 | 1905 | NASA 14.256 II | UNITED STATES | WALLOPS ISLAND | | | C | | | A | | | | | 141 | SOMAYAJULU, Y. V. |
| 03/17/67 | 0348 | NASA 4.194 DG | UNITED STATES | WHITE SANDS | | | | | | | D E | | | | 193 | CARRUTHERS, G. R. HOLMES, J. C. |
| 03/18/67 | 0547 | NASA 8.47 UE | UNITED STATES | FORT CHURCHILL | B | | | B | | | | | | | 794 | O'BRIEN, B. J. |
| 03/22/67 | 1656 | NASA 4.103 DS | UNITED STATES | WALLOPS ISLAND | | | | | | E | | | | | 229 | HINTEREGGER, H. E. |
| 03/23/67 | 1100 | K -10 -03 | JAPAN | KAGOSHIMA | | | | | | | C | | | | 248 | MATSUMOTO, T. |
| 03/23/67 | 1100 | K -10 -03 | JAPAN | KAGOSHIMA | | | | | | | E | | | | 248 | YAMASHITA, K. |
| 03/24/67 | 0555 | VA-66 | FED REP OF GERMANY | HAMMAGUIR | | | X | X | | | | | | | 366 | RAWER, K. |
| 03/27/67 | 1835 | NASA 18.28 UE | UNITED STATES | NATAL | | | C | | | F | | | | | N/A | LOCKWOOD, J. A. |
| 03/29/67 | 0625 | VA-67 | FED REP OF GERMANY | HAMMAGUIR | | | X | X | | | | | | | 306 | RAWER, K. |
| 03/30/67 | 1909 | NASA 18.12 UI | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 237 | BETTINGER, R. T. |
| 03/31/67 | 0001 | NASA 18.09 GE | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 321 | WESCOTT, E. |
| 03/31/67 | 1719 | NASA 10.208 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 115 | SMITH, W. S. |
| 04/01/67 | 0340 | NASA 4.204 GG | UNITED STATES | WHITE SANDS | | | | | | E D | | | | | 139 | UNKNOWN |
| 04/04/67 | 0010 | NASA 10.226 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 04/04/67 | 0522 | NASA 8.39 GI | CANADA UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 798 | HEIKKILA, W. J. BARRINGTON, R. E. |
| 04/05/67 | 0015 | NASA 4.168 CS | UNITED STATES | WHITE SANDS | | | | | | F | F | | | | 160 | ACTON, L. W. |
| 04/07/67 | 0825 | NASA 4.186 UG | UNITED STATES | WHITE SANDS | | | | | | | E | | | | 176 | MORTON, D. C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/07/67 | 1957 | NASA 14.328 IE | UNITED STATES FED REP OF GERMANY | KIRUNA | | X | | X | | | | | | | 231 | RIEGER,E. |
| 04/08/67 | 2003 | NASA 14.329 IE | UNITED STATES FED REP OF GERMANY | KIRUNA | | X | X | | | | | | | | 236 | RIEGER,E. |
| 04/09/67 | 0100 | NASA 14.330 IE | UNITED STATES FED REP OF GERMANY | KIRUNA | | X | X | | | | | | | | 242 | RIEGER,E. |
| 04/10/67 | 2100 | NASA 10.227 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH,W.S.<br>YRNE,F.H.<br>POUNDS,K.A. |
| 04/10/67 | 2214 | NASA 14.331 IE | UNITED STATES FED REP OF GERMANY | KIRUNA | | X | X | | | | | | | | 230 | RIEGER,E. |
| 04/11/67 | 1715 | NASA 10.223 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 126 | SMITH,W.S. |
| 04/11/67 | 2021 | NASA 14.332 IE | UNITED STATES FED REP OF GERMANY | KIRUNA | | X | X | | | | | | | | 236 | RIEGER,E. |
| 04/12/67 | 0522 | NASA 8.39 GI | UNITED STATES | FORT CHURCHILL | | | C<br>E | | | | | | | | 798 | HEIKKLA,W.J.A. |
| 04/12/67 | 1232 | SL-119 | UNITED KINGDOM AUSTRALIA | WOOMERA | X | | | | | X | | | | | 160 | BYRNE,F.N.<br>POUNDS,K.A. |
| 04/12/67 | 1446 | EXAMETNET-19 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 75 | LICHTENSTEIN,L.E. |
| 04/13/67 | 0001 | AF 07.168 | UNITED STATES | EGLIN AFB | | | C<br>E<br>D | | | | | | | | 145 | SAGALYN,R.C. |
| 04/13/67 | 0049 | AF 07.385 | UNITED STATES | EGLIN AFB | | | C<br>E<br>D | | | | | | | | 148 | SAGALYN,R.C. |
| 04/13/67 | 0054 | AF 07.622 | UNITED STATES | EGLIN AFB | | A<br>C | | | | | | | | | 167 | ROSENBERG,N.W. |
| 04/13/67 | 0056 | AF 07.623 | UNITED STATES | EGLIN AFB | | A<br>C | | | | | | | | | 167 | ROSENBERG,N.W. |
| 04/13/67 | 0710 | AF 06.561 | UNITED STATES | EGLIN AFB | | | C<br>E | | | | | | | | 116 | SAGALYN,R.C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/13/67 | 0712 | AG C8.647 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 175 | ROSENBERG, N. W.<br>FAIRE, A. C. |
| 04/18/67 | 1020 | AF C7.384 | UNITED STATES | EGLIN AFB | | A<br>C | | | | | | | | | 135 | NARCISI, R. S.<br>SAGALYN, R. C. |
| 04/18/67 | 1040 | AF C7.560 | UNITED STATES | EGLIN AFB | | F | | | | | | | | | 169 | SAGALYN, R. C.<br>FAIRE, A. C. |
| 04/18/67 | 1121 | AF C7.386 | UNITED STATES | EGLIN AFB | | A<br>C | | | | | | | | | 138 | NARCISI, R. S.<br>SAGALYN, R. C. |
| 04/18/67 | 2008 | NASA 10.228 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 04/20/67 | 0040 | AF C8.650 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 260 | ROSENBERG, N. W. |
| 04/20/67 | 1732 | NASA 10.224 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 107 | SMITH, W. S. |
| 04/24/67 | 1520 | NASA 4.117 GS | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 181 | NEWPERT, W. M. |
| 04/26/67 | C415 | AFF-5B-006 | CANADA | FORT CHURCHILL | | | C | D | | | | | | A | 396 | MCNAMARA, A. G.<br>BULLOCK, W. R. |
| 04/27/67 | 0410 | AFF-5B-007 | CANADA | EGLIN AFB | | | C | D | | | | | | A | 398 | MCNAMARA, A. G.<br>BULLOCK, W. R. |
| 04/28/67 | 0012 | AF C8.651 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 254 | ROSENBERG, N. W. |
| 04/29/67 | 1139 | NASA 10.225 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 123 | SMITH, W. S. |
| 04/30/67 | 0140 | NASA 10.229 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 05/03/67 | 1429 | REHBAR-15 | PAKISTAN | SONMIANI | | V | | | | | | | | | 150 | BLAMONT, J. E.<br>SHAFI AHMAD, M. |
| 05/04/67 | 0726 | AAD-5B-010 | CANADA | FORT CHURCHILL | B | G | C<br>E | | | | | | | | 354 | SHEPHERD, G. G.<br>MCEWEN, D. J.<br>WHALEN, B. A. |
| 05/04/67 | 2007 | NASA 10.232 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 115 | SMITH, W. S. |
| 05/05/67 | 0400 | NASA 4.157 GG | UNITED STATES | WHITE SANDS | | | | | | | E<br>D | | | | 159 | EVANS, D. S. |
| 05/05/67 | 0730 | NASA 4.203 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 110 | MORTON, D. C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/05/67 | 1700 | NASA 14.268 UI | UNITED STATES | FORT CHURCHILL | B | | X | | | | | | | | 136 | HEIKKLA, W. J. A. |
| 05/07/67 | 1100 | K-1C-003 | JAPAN | KAGOSHIMA | | | | | | | D | | | | 250 | YAMASHITA, K. |
| 05/07/67 | 1430 | REHBAR-16 | PAKISTAN | SONMIANI | | V | | | | | | | | | 150 | BLAMONT, J. E.<br>SHAFI AHMAD, M. |
| 05/07/67 | 1526 | | USSR | 00D 32'S 087D 17'E | | | X | | | | | | | | N/A | UNKNOWN |
| 05/09/67 | 0720 | NASA 10.230 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 05/09/67 | 2100 | ND 3.199 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 182 | KOOMEN, M. J.<br>PURCELL, J. D.<br>BYRAM, E. T. |
| 05/11/67 | 0825 | NASA 10.233 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 129 | SMITH, W. S. |
| 05/11/67 | 0855 | NASA 10.161 GM | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | | 70 | HILSERVATH, E.<br>ILSENRATH, E. |
| 05/15/67 | 1140 | NASA 10.231 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 05/16/67 | 0832 | NB 3.177 | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 148 | BYRAM, E. T. |
| 05/17/67 | 2058 | NASA 8.43 UA | UNITED STATES | WALLOPS ISLAND | | | A | | | | | | | A | 1006 | DAMON, K. R. |
| 05/21/67 | 0700 | 154-100 | UNITED STATES | BARKING SANDS | | F<br>C<br>Y | | | | | | | | | 100 | SMITH, L. B. |
| 05/22/67 | 0012 | SK-17 | ITALY | SARDINIA | | | | X | | | E | | | | 230 | BUTLER, H. E.<br>BRINI, D. |
| 05/25/67 | 0900 | MR-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | N/A | UNKNOWN |
| 05/25/67 | 2324 | SK-19 | ITALY | SARDINIA | | | | | | | E | | | | 215 | BUTLER, H. E. |
| 06/00/67 | 0000 | AEROBEE 150 | UNITED STATES | WHITE SANDS | | | | | | | D | | | | N/A | UNKNOWN |
| 06/01/67 | 0554 | 154-097 | UNITED STATES | BARKING SANDS | | Y<br>C | | | | | | | | | 165 | SMITH, L. B. |
| 06/01/67 | 0645 | 154-099 | UNITED STATES | BARKING SANDS | | F<br>C<br>Y | | | | | | | | | 100 | SMITH, L. B. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/01/67 | 0815 | 154-092 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 160 | SMITH,L.B. |
| 06/01/67 | 1000 | 154-095 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 160 | SMITH,L.B. |
| 06/01/67 | 1030 | 154-101 | UNITED STATES | BARKING SANDS | | F C Y | | | | | | | | | 100 | SMITH,L.B. |
| 06/01/67 | 1225 | 154-094 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 160 | SMITH,L.B. |
| 06/02/67 | 0430 | NASA 4.210 GG | UNITED STATES | WHITE SANDS | | | | | | | E | | | | 179 | BOGGESS,A. SMITH,A. STECHER,T.P. |
| 06/02/67 | 0934 | SANDIA 154-93 | UNITED STATES | BARKING SANDS | | A V | | | | X | | | | | 160 | UNKNOWN |
| 06/03/67 | 0547 | 154-098 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 170 | SMITH,L.B. |
| 06/06/67 | | LUSTER I | ISRAEL | | | | | | | | | A | | | 140 | UNKNOWN |
| 06/06/67 | 1420 | NASA 4.222 NA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 138 | FARLOW,NH.. |
| 06/06/67 | 2219 | NASA 18.29 UE | UNITED STATES | FORT CHURCHILL | | | A C | B | | F E | | | | | N/A | LOCKWOOD,J.A. |
| 06/07/67 | 1320 | AG 07.272 | UNITED STATES | EGLIN AFB | | | | | | | | A | | | 154 | SKRIVANEK,R. |
| 06/09/67 | 0415 | | UNITED STATES | | | | | | | | D | | | | N/A | UNKNOWN |
| 06/09/67 | 0415 | | UNITED STATES | WHITE SANDS | | | | | | | D | | | | N/A | UNKNOWN |
| 06/13/67 | 1636 | | USSR | 39D 28'S 069D 05'E | | | X | | | | | | | | N/A | UNKNOWN |
| 06/13/67 | 2308 | NASA 14.297 CE | UNITED STATES | WALLOPS ISLAND | | | | B | | | G | | | | 179 | WATERS,J. |
| 06/15/67 | 1638 | | USSR | 47D 43'S 059D 50'E | | | X | | | | | | | | N/A | UNKNOWN |
| 06/16/67 | 1037 | NASA 8.49 IE | UNITED STATES | NATAL | | | | C | | | | | | | 1100 | PIEPER,G.F. KEPPLER,E. |
| 06/17/67 | 0830 | NASA 8.50 IE | UNITED STATES | NATAL | | | | C | | | | | | | 991 | PIEPER,G.F. KEPPLER,E. |
| 06/17/67 | 1628 | | USSR | 56D 08'S 059D 48'E | | | X | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/17/67 | 2115 | | USSR | 60D 02'S 060D 10'E | | | X | | | | | | | | N/A | UNKNOWN |
| 06/21/67 | 1902 | NASA 8.26 UI | UNITED STATES | WALLOPS ISLAND | | | D<br>E | | | | | | | | 792 | HANSON,W.B.<br>BRACE,L.H. |
| 06/21/67 | 1949 | NASA 4.179 UA | UNITED STATES | WHITE SANDS | | G<br>C | | | | | | | | | 210 | NIER,A.O.C. |
| 06/24/67 | 0826 | NASA 10.238 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH,W.S. |
| 06/24/67 | 2035 | NASA 10.237 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH,A.M. |
| 06/25/67 | 0834 | NASA 10.239 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH,W.S. |
| 06/28/67 | 1032 | AD 21.860 | UNITED STATES | WALLOPS ISLAND | | | X | | | | | | | E | 274 | ROTMAN,W. |
| 07/05/67 | 1942 | AE 03.582 | UNITED STATES | FORT CHURCHILL | X | | | | | | | | | | N/A | SILVERMAN,S. |
| 07/07/67 | 2306 | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | | F | | | | N/A | UNKNOWN |
| 07/08/67 | 0010 | S01H | UNITED KINGDOM | SOUTH UIST | | | C | | | | | | | | 73 | WILLIAMS,E.R. |
| 07/08/67 | 0410 | NASA 4.190 UG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 142 | BRADT,H.V. |
| 07/12/67 | 0023 | ADF-3 -024 | CANADA | FORT CHURCHILL | | | | | | B | | | | | 95 | JONES,A.V.<br>LLEWELLYN,E.J. |
| 07/12/67 | 1100 | ADF-3 -025 | CANADA | FORT CHURCHILL | | | | | | B | | | | | 95 | JONES,A.V.<br>LLEWELLYN,E.J. |
| 07/20/67 | 0900 | NASA 4.212 UA | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 209 | NIER,A.O.C. |
| 07/20/67 | 1924 | NASA 4.211 UA | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 210 | NIER,A.O.C. |
| 07/23/67 | 0053 | NASA 14.337 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 204 | BEDINGER,J. |
| 07/30/67 | 0030 | OBC6.003C | UNITED STATES | EGLIN AFB | | | | X | | | | | | | N/A | UNKNOWN |
| 07/31/67 | 0031 | CE-C30 | SWEDEN | KIRUNA | | K | | | | | | | | | 128 | WITT,G. |
| 07/31/67 | 0058 | CE-C31 | SWEDEN | KIRUNA | | K | | | | | | A | | | 127 | SITTE,K.<br>FECHTIG,H.<br>LIMBLAD,B.A. |
| 08/02/67 | 2258 | NASA 15.16 DA | UNITED STATES | POINT MUGU | | | | | | | | | | C | N/A | KRUEGER,A.J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE(KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/03/67 | | NASA 14.97 UM | UNITED STATES | POINT BARROW | | J | | | | | | | | | N/A | SMITH,W.S. |
| 08/03/67 | 0736 | BLACK BRANT VB | FED REP OF GERMANY | FORT CHURCHILL | | X | X | | | | | | | | 380 | RIEGER,E. |
| 08/03/67 | 1110 | | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | UNKNOWN |
| 08/04/67 | 0453 | NASA 4.172 UG | UNITED STATES | WHITE SANDS | | | | | | | F D E | | | | 130 | CODE,A.D. BLESS,R.C. |
| 08/05/67 | 0404 | BLACK BRANT VB | FED REP OF GERMANY | FORT CHURCHILL | | X | X | | | | | | | | 380 | RIEGER,E. |
| 08/05/67 | 0956 | NASA 14.290 UM | UNITED STATES | POINT BARROW | | C D | | | | | | | | | 150 | HORVATH,J.J. |
| 08/08/67 | 0328 | SL-305 | UNITED KINGDOM | WOOMERA | | | | | | B | | | | | 182 | POUNDS,K.A. GLENCROSS,W.M. |
| 08/08/67 | 1257 | NASA 4.207 UA | UNITED STATES | WHITE SANDS | | | D C | | | | | | | | 289 | JONES,L.M. |
| 08/08/67 | 2148 | AH C3.529 | UNITED STATES | WHITE SANDS | | | | | | B | | | | | 235 | HINTEREGGER,H.E. |
| 08/08/67 | 2356 | NASA 14.273 UI | UNITED STATES | WALLOPS ISLAND | | | C A B | | | | | | | | 141 | BOWHILL,S.A. SMITH,L.G. |
| 08/09/67 | 0343 | NASA 14.338 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 214 | BEDINGER,J.F. |
| 08/09/67 | 0758 | NASA 14.340 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 211 | BEDINGER,J.F. |
| 08/09/67 | 0847 | NASA 14.339 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 204 | BEDINGER,J.F. |
| 08/09/67 | 0847 | NASA 14.342 GM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 158 | BEDINGER,J.F. |
| 08/09/67 | 0928 | NASA 14.341 GM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 199 | BEDINGER,J.F. |
| 08/11/67 | | LUSTEP II | ISRAEL | | | | | | | | | A | | | 140 | UNKNOWN |
| 08/11/67 | 0900 | NASA 4.223 NA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 141 | FARLOW,NH.. |
| 08/11/67 | 2025 | | USSR | 20D 02'S 064D 59'E | | | X | | | | | | | | N/A | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/12/67 | 0630 | NC 3.187 | UNITED STATES | WHITE SANDS | | | C E | | | | | | | | 222 | YOUNG, J. HOLMES, J.C. CARRUTHERS, G.R. PATTERSON, N.P. |
| 08/15/67 | 1845 | AG 03.528 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 243 | HINTEREGGER, H.E. |
| 08/16/67 | 1425 | EXAMETNET-23 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 70 | LICHTENSTEIN, L.E. |
| 08/21/67 | 1932 | NASA 15.17 DA | UNITED STATES | POINT MUGU | | | | | | | | | | C | 53 | KRUEGER, A.J. |
| 08/24/67 | 1005 | SL-821 | UNITED KINGDOM | WOOMERA | C | | | | | | | | | | 178 | INGHAM, M.F. |
| 08/25/67 | | NASA 15.21 II | UNITED STATES NORWAY | ANDOYA | | | X | | | | | | | | N/A | KANE, J.A. |
| 08/26/67 | 0436 | NASA 4.187 CG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 125 | FISHER, P.C. |
| 08/26/67 | 0635 | AF 07.328 | UNITED STATES | EGLIN AFB | | F | | | | | | | | | 177 | MCISAAC, J.P. |
| 08/26/67 | 1139 | NASA 10.241 GM | UNITED STATES | NATAL | | Z | | | | | | | | | 92 | SMITH, W.S. |
| 08/26/67 | 2339 | NASA 10.242 GM | UNITED STATES | NATAL | | Z | | | | | | | | | 95 | SMITH, W.S. |
| 08/28/67 | 0030 | NASA 10.243 GM | UNITED STATES | NATAL | | Z | | | | | | | | | 92 | SMITH, W.S. |
| 08/29/67 | 1001 | SL-822 | UNITED STATES | WOOMERA | C | | | | | | | | | | 124 | INGHAM, M.F. |
| 08/30/67 | 1700 | ION 1/67 | ARGENTINA | CHAMICAL | | | C E B | | | | | | | | 222 | DE RAGONE, A.H. RADICELLA, S. |
| 08/30/67 | 1732 | ION 1/67 | ARGENTINA | CHAMICAL | | X | X | | | | | | | | 225 | DE RAGONE, A.H. ADICELLA, S. |
| 08/30/67 | 1737 | ION 1/67 | ARGENTINA | CHAMICAL | | | C E B | | | | | | | | 225 | DE RAGONE, A.H. RADICELLA, S. |
| 08/31/67 | 2206 | NASA 18.43 GE | UNITED STATES | ANDOYA | | | B | | | | | | | | N/A | WESCOTT, E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/31/67 | 2247 | NASA 18.46 GE | UNITED STATES | ANDOYA | | V | | | B | | | | | | N/A | EVANS,D.C.<br>AGGSON,T.L.<br>STOLARIK,J.D.<br>OGILVIE,K.W.<br>MAYNARD,N.C. |
| 09/02/67 | 2031 | NASA 18.44 GE | UNITED STATES | ANDOYA | | V | | | B | | | | | | N/A | WESCOTT,E. |
| 09/02/67 | 2042 | NASA 18.47 GE | UNITED STATES | ANDOYA | | V | | | B | | | | | | N/A | EVANS,D.C.<br>AGGSON,T.L.<br>STOLARIK,J.D.<br>OGILVIE,K.W.<br>MAYNARD,N.C. |
| 09/06/67 | 2235 | AER 1/67 | ARGENTINA | CHAMICAL | | V | | | | | | | | | N/A | ZARAGOZA,A. |
| 09/07/67 | 0007 | NASA 14.305 UI | UNITED STATES | | | | C<br>D<br>E<br>B | | | | | | | | N/A | BOWHILL,S.A.<br>SMITH,L.G. |
| 09/07/67 | 0950 | AER 1/67-3 | ARGENTINA | CHAMICAL | | V | | | | | | | | | N/A | ZARAGOZA,A. |
| 09/07/67 | 2034 | NASA 14.309 UI | UNITED STATES | ARECIBO | | | C<br>D<br>E<br>B | | | | | | | | N/A | SMITH,L.G.<br>BOWHILL,S.A. |
| 09/08/67 | 0321 | NB 3.196 | UNITED STATES | WHITE SANDS | | | | | | F | | | | | N/A | MEEKINS,J.F.<br>HENRY,R.C.<br>FRITZ,G.<br>FRIEDMAN,H.<br>BYRAM,E.T. |
| 09/08/67 | 1003 | NASA 14.308 UI | UNITED STATES | | | | B<br>C<br>D<br>E | | | | | | | | N/A | BOWHILL,S.A.<br>SMITH,L.G. |
| 09/12/67 | 2057 | NASA 18.45 GE | UNITED STATES | ANDOYA | | V | | | B | | | | | | N/A | WESCOTT,E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/12/67 | 2059 | NASA 18.48 CE | UNITED STATES | ANDOYA | | V | | | | | | | | | N/A | AGGSON, T. L.<br>MAYNARD, N. C.<br>OGILVIE, K.<br>STOLARIK, J. D.<br>MCILWRAITH, N. |
| 09/12/67 | 2225 | NASA 12.07 GT | UNITED STATES | WHITE SANDS | | | | | | | | | | A | N/A | BUSSE, J. R. |
| 09/13/67 | 2030 | EXAMETNET-24 | ARGENTINA | CHAMICAL | | A | | | | | | | | | N/A | LICHTENSTEIN, L. F. |
| 09/14/67 | 0029 | NASA 15.35 DA | UNITED STATES | BARKING SANDS | | G | | | | D | | | | | 60 | KRUEGER, A. J. |
| 09/17/67 | 0015 | NASA 15.36 DA | UNITED STATES | BARKING SANDS | | G | | | | D | | | | | 56 | KRUEGER, A. J. |
| 09/18/67 | 1910 | NASA 18.50 GA | UNITED STATES | WALLOPS ISLAND | | G | C<br>E | | | | | | | | 286 | CARIGNAN, G. R. |
| 09/20/67 | 0000 | NASA 15.37 DA | UNITED STATES | BARKING SANDS | | | | | | D | | | | | 53 | KRUEGER, A. J. |
| 09/21/67 | 0738 | NASA 8.45 UI | UNITED STATES | WALLOPS ISLAND | | | B | | B | | | | | | 768 | GURNETT, D. A. |
| 09/27/67 | 1332 | SK-18 | UNITED KINGDOM | SARDINIA | | | C<br>E | | | F | | | | | 175 | HALL, J. E.<br>SAYERS, J. |
| 09/28/67 | 1635 | AFF-SA-119 | CANADA | FORT CHURCHILL | | | C<br>E<br>A | | | | | | | A | N/A | WLOCHOWICZ, R. |
| 09/30/67 | 1614 | NASA 4.104 DS | UNITED STATES | WALLOPS ISLAND | | | | | | E | | | | | 216 | HINTEREGGER, H. E. |
| 10/02/67 | 2000 | AD 06.842 | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 108 | ELLIS, C. E. |
| 10/03/67 | 1818 | NASA 4.152 GS | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 184 | UNDERWOOD, J. H. |
| 10/04/67 | 0018 | AH 08.646 | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 249 | ROSENBERG, N. W.<br>PURCELL, J. D. |
| 10/04/67 | 0020 | AH 8.645 | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 251 | ROSENBERG, N. W. |
| 10/04/67 | 0020 | AH 08.665 | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | N/A | ROSENBERG, N. W. |
| 10/04/67 | 1312 | DE-C35 | NORWAY | ANDOYA | | | | | | F | | | | | 248 | DE JAGER, C.<br>VON ZAHN, U. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/04/67 | 1323 | SK-2C | ITALY | SARDINIA | | | E | | | | | | | | 206 | RAWER, K.<br>BOYD, R. L. F.<br>VON ZAHN, U. |
| 10/05/67 | 0411 | AFF-5A-120 | CANADA | FORT CHURCHILL | | | C | | | | | | | A | 118 | WLOCHOWICZ, R.<br>MCNAMARA, A. G.<br>BULLOCK, W. R. |
| 10/05/67 | 1430 | NASA 4.243 DS | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 173 | KOOMEN, M. J. |
| 10/05/67 | 1430 | ND 3.192 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 172 | PURCELL, J. D. |
| 10/07/67 | 1032 | DE-C30 | NORWAY | ANDOYA | | | | | | F | | | | | 233 | DE JAGER, C.<br>ZAHRINGER, J. |
| 10/07/67 | 1450 | SK-CE | ITALY | SARDINIA | | | C<br>E | | | F | | | | | 164 | HALL, J. E.<br>SAYERS, J. |
| 10/10/67 | 1433 | SK-1S | ITALY | SARDINIA | | G | E | | | | | | | | 204 | RAWER, K.<br>VASSY, E.<br>BOYD, R. L. F. |
| 10/12/67 | | VERTICAL SPACE | USSR | | | | | | | D | | | | | N/A | UNKNOWN |
| 10/13/67 | 0450 | | UNITED STATES<br>NORWAY | ANDOYA | | | C<br>A | | | | | | | | 87 | FOLKESTAD, K.<br>LANDMARK, B.<br>SKOVLI, G.<br>KANE, J. A. |
| 10/13/67 | 2141 | NASA 15.38 DA | UNITED STATES | BARKING SANDS | | | | | | E | | | | | 59 | KRUEGER, A. J. |
| 10/14/67 | 1120 | NASA 10.248 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 10/15/67 | 1115 | NASA 10.244 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 10/15/67 | 2315 | NASA 10.245 GM | UNITED STATES | NATAL | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 10/18/67 | 2103 | EXAMETNET-25 | ARGENTINA<br>UNITED STATES | CHAMICAL | | A | | | | | | | | | 66 | LICHTENSTEIN, L. E. |
| 10/19/67 | 1205 | NASA 4.239 US | UNITED STATES | WHITE SANDS | | | | | | D<br>E | | | | | 182 | RENSE, W. A. |
| 10/19/67 | 2104 | NASA 15.39 DA | UNITED STATES | BARKING SANDS | | | | | | D | | | | | 58 | KRUEGER, A. J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/22/67 | 0942 | AKF-3 -027 | CANADA | RESOLUTE BAY | | | C | | | F | | | | | 95 | MCNAMARA, A.G.<br>BOURNE, I.A. |
| 10/22/67 | 2046 | NASA 15.40 DA | UNITED STATES | BARKING SANDS | | | | | | D | | | | | 59 | KRUEGER, A.J. |
| 10/23/67 | 1605 | NIKE APACHE | FED. REP. OF GERMANY | KIRUNA | | X | X | | | | | | | | 235 | NEUSS, H. |
| 10/24/67 | 1950 | NASA 15.33 GM | UNITED STATES | RESOLUTE BAY | | | A | | | | | | | | N/A | KANE, J.A. |
| 10/24/67 | 2400 | AG 07.638 | UNITED STATES | ARECIBO | | | | | | | | | | | N/A | SAGALYN, R.C. |
| 10/25/67 | 2030 | NASA 15.41 DA | UNITED STATES | BARKING SANDS | | | | | | D | | | | | 59 | KRUEGER, A.J. |
| 10/27/67 | 1045 | NASA 4.158 GG | UNITED STATES | WHITE SANDS | | | | | | | X | | | | 160 | EVANS, D.S. |
| 10/27/67 | 1814 | AG 07.640 | UNITED STATES | ARECIBO | | | | | | | | | | | N/A | SAGALYN, R.C. |
| 10/28/67 | 1015 | AG 07.641 | UNITED STATES | ARECIBO | | | | | | | | | | | N/A | SAGALYN, R.C. |
| 11/01/67 | 0430 | SL-407 | UNITED KINGDOM | WOOMERA | | | D | B | | E | | | | | 209 | WILSON, R.<br>STEWART, K.H.<br>POUNDS, K.A. |
| 11/01/67 | 1130 | NASA 4.226 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 176 | MORTON, D.C. |
| 11/14/67 | 0527 | SL-423 | UNITED KINGDOM | WOOMERA | | | C | | | E | | | | | 178 | HALL, J.E.<br>HALL, S.H. |
| 11/14/67 | 0527 | SL-424 | UNITED KINGDOM | WOOMERA | | | C | | | E | | | | | 178 | HALL, J.E.<br>HALL, S.H. |
| 11/14/67 | 1005 | NASA 4.229 DG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 172 | CARRUTHERS, G.R. |
| 11/15/67 | 1557 | EXAMETNET-26 | ARGENTINA<br>UNITED STATES | CHAMICAL | | A<br>C | | | | | | | | | N/A | LICHTENSTEIN, L.E. |
| 11/15/67 | 2034 | AD 03.365 | UNITED STATES | NATAL | E | | | | | | | | | | 224 | SILVERMAN, S. |
| 11/16/67 | 1814 | NASA 14.298 UI | UNITED STATES | WALLOPS ISLAND | | | X | | | | | | | | 167 | BETTINGER, R.T. |
| 11/19/67 | 1108 | AG 07.314 | UNITED STATES | NATAL | | | | | | | | | | A | 119 | HOULT, C.P. |
| 11/20/67 | 0037 | F-20 | INTERNATIONAL<br>SWEDEN<br>UNITED STATES | ANDOYA | | | C | X | | | | | | | 120 | RIEDLER, W.W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/20/67 | 1042 | NASA 4.228 CG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 144 | GIACCONI,R.<br>GURSKY,H. |
| 11/22/67 | 1007 | AG 07.319 | UNITED STATES | NATAL | | | | | | | | | | X | N/A | UNKNOWN |
| 11/24/67 | 0539 | NASA 18.34 LE | UNITED STATES | FORT CHURCHILL | | | | X | | | | | | | N/A | ANDERSON,K.A. |
| 11/24/67 | 1037 | CE-C36 | SWEDEN | KIRUNA | | G | A | D | | | | | | | 160 | BOYD,R.L.F.<br>BRYANT,D.A.<br>PETERS,B. |
| 11/26/67 | 1944 | CE-C17 | SWEDEN | KIRUNA | | | A | | | | | | | | 125 | RAWER,K.<br>PETERS,B. |
| 11/29/67 | C105 | NASA 14.250 IM | UNITED STATES | SONMIANI | | V | | | | | | | | | 175 | REES,D.J.<br>RAHMATULLAH,M. |
| 11/29/67 | C210 | SUPARCO-033/67 | PAKISTAN<br>UNITED KINGDOM | SONMIANI | | X | | | | | | | | | 60 | RAHMATULLAH,M.<br>KARACHI,S.<br>JAFRI,S.A. |
| 11/29/67 | 2251 | AF 07.658 | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | N/A | SISSENWINE,N. |
| 11/29/67 | 2251 | AF 07.661 | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | N/A | SISSENWINE,N. |
| 12/00/67 | 0000 | AEROBEE 150 | UNITED STATES | WHITE SANDS | | | | | | | D | | | | N/A | UNKNOWN |
| 12/03/67 | 2253 | AF 07.662 | UNITED STATES | EGLIN AFB | | A<br>V | | | | | | | | | 124 | LENHARD,R.W. |
| 12/03/67 | 2253 | AF 07.657 | UNITED STATES | EGLIN AFB | | A<br>V | | | | | | | | | 119 | LENHARD,R.W. |
| 12/04/67 | 1145 | KP 03.20 | UNITED STATES | WHITE SANDS | | | | | | | | X | | | 167 | ANDERSON,R.C. |
| 12/04/67 | 2220 | AF 07.387 | UNITED STATES | FORT CHURCHILL | | | D | | | | | | | | 146 | NARCISI,R.S. |
| 12/04/67 | 2244 | AF 07.388 | UNITED STATES | FORT CHURCHILL | | | D | | | | | | | | 122 | NARCISI,R.S. |
| 12/05/67 | | AEROBEE | UNITED STATES | | | | | | | | | X | | | N/A | UNKNOWN |
| 12/05/67 | 0324 | NASA 18.66 UA | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | N/A | MURCRAY,W.B. |
| 12/05/67 | 1130 | NASA 4.197 UA | UNITED STATES | WHITE SANDS | | | | | | | D | | | | N/A | FASTIE,W.G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/05/67 | 1130 | | UNITED STATES | WHITE SANDS | | L | | | | | | | | | 137 | UNKNOWN |
| 12/05/67 | 1911 | NASA 4.213 NB | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | X | 137 | KRIEGER,R.L.<br>LANGE,K.O. |
| 12/05/67 | 2035 | | FED REP OF GERMANY | KIRUNA | X | | | X | | | | | | | 206 | PIEPER,G.F.<br>KEPPLER,E. |
| 12/06/67 | 1045 | NASA 4.219 GG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 210 | BOGGESS,A.<br>SMITH,A. |
| 12/06/67 | 1630 | AF 17.750 D | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | | 137 | SANDOCK,J. |
| 12/06/67 | 1825 | AG C7.880 | UNITED STATES | FORT CHURCHILL | | | D | | | | | | | | 132 | NARCISI,R.S. |
| 12/06/67 | 1825 | AF C7.389 | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | N/A | NARCISI,R.S. |
| 12/06/67 | 2121 | CE-CC2 | SWEDEN | KIRUNA | | | A | | | | | | | | 129 | RAWER,K.<br>PETERS,B. |
| 12/08/67 | 0100 | NASA 8.35 UI | UNITED STATES | FORT CHURCHILL | | | D<br>E | | | | | | | | 805 | HANSON,W.B.<br>BRACE,L.H. |
| 12/10/67 | 2200 | NASA 4.201 NT | UNITED STATES | WHITE SANDS | | | | | | | | | | C | 160 | HANSEN,M.O. |
| 12/12/67 | 0913 | SUPARCO-034/67 | PAKISTAN<br>UNITED KINGDOM | SONMIANI | | X | | | | | | | | | 63 | RAHMATULLAH,M.<br>JAFRI,S.A. |
| 12/12/67 | 2148 | NASA 14.347 UA | UNITED STATES | WALLOPS ISLAND | | F | | | | | | | | | 94 | PEARCE,J.B. |
| 12/12/67 | 2159 | NASA 10.245 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 110 | SMITH,W.S. |
| 12/13/67 | 0744 | AG 07.627 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 187 | ROSENBERG,N.W. |
| 12/13/67 | 0822 | AG C7.630 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 164 | ROSENBERG,N.W. |
| 12/13/67 | 0840 | | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | UNKNOWN |
| 12/13/67 | 1355 | EXAMETNET-27 | ARGENTINA<br>UNITED STATES | CHAMICAL | | A | | | | | | | | | 69 | LICHTENSTEIN,L.E. |
| 12/14/67 | 0858 | AG 07.631 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 161 | ROSENBERG,N.W. |
| 12/14/67 | 2300 | ORION RAD I/67 | ARGENTINA | CHAMICAL | | | | | | | F | | | | 35 | CHIELMETTI,H. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/16/67 | 1458 | ORION RAD 2/67 | ARGENTINA | CHAMICAL | | A V | | | | | F | | | | 70 | CHIELMETTI, H. |
| 12/16/67 | 2258 | AF 07.663 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | N/A | SISSENWINE, N. |
| 12/16/67 | 2258 | AF 07.659 | UNITED STATES | EGLIN AFB | | A V | | | | | | | | | 127 | LENHARD, R. W. |
| 12/18/67 | 1300 | NASA 10.246 | UNITED STATES | NATAL | | Z | | | | | | | | | 95 | SMITH, W. S. |
| 12/19/67 | 0100 | NASA 10.247 | UNITED STATES | NATAL | | Z | | | | | | | | | 96 | SMITH, W. S. |
| 12/19/67 | 1310 | NASA 10.250 | UNITED STATES | NATAL | | Z | | | | | | | | | 92 | SMITH, W. S. |
| 01/16/68 | 1929 | NASA 10.275 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 141 | SOMAYAJULU, Y. V. |
| 01/16/68 | 1974 | NASA 10.273 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 137 | SOMAYAJULU, Y. V. |
| 01/17/68 | 1725 | EXAMETNET-28 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 71 | LICHTENSTEIN, L. E. |
| 01/18/68 | 0008 | AG 07.634 | UNITED STATES | FORT CHURCHILL | | A G | | | | | | | | | 193 | GOLOMB, D. |
| 01/19/68 | 0224 | AAF-2 -108 | CANADA | FORT CHURCHILL | X | | X | | X | | | | | | 142 | MCNAMARA, A. G.<br>LIOCHOWICZ, P.<br>KAVADAS, A.<br>WILSON, B.<br>FORSYTH, P. A.<br>MCEWEN, D. |
| 01/19/68 | 2310 | AG 07.633 | UNITED STATES | FORT CHURCHILL | | A G | | | | | | | | | 191 | GOLOMB, D. |
| 01/22/68 | 0340 | ADD-68-011 | CANADA | FORT CHURCHILL | B | | C E | D | | | | | | | N/A | MCNAMARA, A. G.<br>WHALEN, B. A.<br>FORSYTH, P. A. |
| 01/22/68 | 0430 | NASA 18.62 GM | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | | 296 | HEATH, D. F. |
| 01/22/68 | 1315 | AG 08.648 | UNITED STATES | FORT CHURCHILL | | A G | | | | | | | | | N/A | GOLOMB, D.<br>HARPELL, G. |
| 01/22/68 | 1320 | AG 07.635 | UNITED STATES | FORT CHURCHILL | | A G | | | | | | | | | 188 | GOLOMB, D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/22/68 | 1705 | NA 3.201 | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 175 | FRITZ,G.<br>UNZICKER,A.<br>NIDEY,R. |
| 01/23/68 | 0533 | NASA 18.13 UE | UNITED STATES | FORT CHURCHILL | X | | | X | | | | | | | N/A | MATHER,K.B. |
| 01/23/68 | 0558 | ADD-58-109 | CANADA<br>UNITED STATES | FORT CHURCHILL | E | | B<br>E | | | | X | | | | 150 | KAVADAS,A.<br>MCNAMARA,A.G.<br>WLOCHOWICZ,R.<br>FORSYTH,P.A.<br>MCEWEN,D.J. |
| 01/24/68 | 1130 | ORION-RAD 2/28 | UNITED STATES | MAR CHIQUITA | | | | B | | | | | | | 90 | SANTOCHI,O. |
| 01/26/68 | 0400 | NASA 4.205 GG | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 160 | STECHER,T.P. |
| 01/30/68 | 0507 | AKD-2 -111 | CANADA<br>UNITED STATES | FORT CHURCHILL | C | | E<br>C | B | | | | | | | 161 | ANGER,C.D.<br>MCNAMARA,A.G.<br>WHALEN,B.A.<br>FORSYTH,P.A.<br>MCEWEN,D.J. |
| 02/01/68 | | ESROC36/001 | UNITED KINGDOM<br>SWEDEN | KIRUNA | | Z | | | | | | | | | N/A | UNKNOWN |
| 02/01/68 | 0542 | CE-34 | UNITED KINGDOM | KIRUNA | | A<br>Z<br>C | | | | | | | | | 150 | JAESCHKE,R.<br>GROVES,G.V. |
| 02/01/68 | 1853 | NASA 10.264 GM | UNITED STATES | WALLOPS ISLAND | | Z<br>Y | | | | | | | | | 104 | SMITH,W.S. |
| 02/01/68 | 1900 | | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | N/A | UNKNOWN |
| 02/01/68 | 1930 | NASA 10.260 GM | UNITED STATES | FORT CHURCHILL | | A<br>B<br>C | | | | | | | | | 127 | SMITH,W.S. |
| 02/01/68 | 2015 | NASA 10.261 GM | UNITED STATES | FORT CHURCHILL | | A<br>B<br>C | | | | | | | | | 137 | SMITH,W.S. |
| 02/01/68 | 2115 | NASA 10.262 GM | UNITED STATES | FORT CHURCHILL | | A<br>B<br>C | | | | | | | | | 130 | SMITH,W.S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/02/68 | 0610 | NASA 4.220 GG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 149 | STECHER,T.P. |
| 02/02/68 | 1326 | INCOSPAR 10.13 | INDIA | THUMBA | | A | C | | | | | | | | 171 | BHAVSAR,P.D. |
| 02/02/68 | 1340 | INCOSPAR 15.CC | INDIA | THUMBA | | A | | | | | | | | | 159 | BHAVSAR,P.D. |
| 02/02/68 | 1900 | NASA 10.259 GM | UNITED STATES | FORT CHURCHILL | | A B C | | | | | | | | | 126 | SMITH,W.S. |
| 02/03/68 | 1712 | POOSH | UNITED KINGDOM | SOUTH UIST | | | C E | C | | | | | | | 140 | BRYANT,D.A. |
| 02/04/68 | | ESROC36/002 | UNITED KINGDOM SWEDEN | KIRUNA | | Z | | | | | | | | | N/A | UNKNOWN |
| 02/04/68 | 0533 | CE-35 | UNITED KINGDOM | KIRUNA | | A Z C | | | | | | | | | 146 | JAESCHKE,R. GROVES,G.V. |
| 02/05/68 | 1900 | NASA 12.08 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 119 | SORGNIT,E.F. NOLAN,M.B. |
| 02/05/68 | 2222 | NASA 10.263 GM | UNITED STATES | FORT CHURCHILL | | A B C | | | | | | | | | 127 | SMITH,W.S. |
| 02/06/68 | 0507 | NASA 18.38 UE | UNITED STATES | FORT CHURCHILL | B | | C B | B | | | | | | | N/A | CAHILL,L.J. MCILWAIN,C. |
| 02/07/68 | 1600 | NASA 10.234 GM | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 67 | RAST,J. |
| 02/08/68 | | SL-583A | UNITED KINGDOM AUSTRALIA | WOOMERA | | | | | | | | | | A | 300 | UNKNOWN |
| 02/09/68 | 0441 | NASA 4.217 UA | UNITED STATES | FORT CHURCHILL | B | | D | | | | | | | | 155 | DONAHUE,T.M. FASTIE,W.G. |
| 02/13/68 | 1556 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 86 | UNKNOWN |
| 02/14/68 | 1333 | EXAMETNET-29 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 70 | LICHTENSTEIN,L.E. |
| 02/17/68 | 0224 | KP 3.22 | UNITED STATES | WHITE SANDS | | | | | | | X | | | | 183 | RAST,J.J. |
| 02/17/68 | 1154 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 81 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/19/68 | 1855 | AH 03.531 | UNITED STATES | WHITE SANDS | | | C | | | D | | | | | 243 | HINTERREGGER, H.E.<br>HIGGINS, J.E. |
| 02/19/68 | 2315 | NASA 4.169 CS | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 161 | ACTON, L.W. |
| 02/21/68 | 1940 | INCOSPAR 25.02 | INDIA | THUMBA | | G | | | | | | | | | 136 | SHIRKE, J.S.<br>POKHUNKOV, A.A. |
| 02/21/68 | 2317 | NASA 14.284 CA | UNITED STATES | WALLOPS ISLAND | C | V | E | | | | | | | | 150 | PRESSMAN, J. |
| 02/22/68 | 0509 | NASA 14.364 CM | UNITED STATES | WALLOPS ISLAND | | A<br>V<br>F | | | | | | | | | 156 | SMITH, W.S. |
| 02/22/68 | 0630 | NASA 14.365 CM | UNITED STATES | WALLOPS ISLAND | | A<br>V<br>F | | | | | | | | | 175 | SMITH, W.S. |
| 02/22/68 | 0800 | NASA 14.366 CM | UNITED STATES | WALLOPS ISLAND | | A<br>V<br>F | | | | | | | | | 181 | SMITH, W.S. |
| 02/22/68 | 0930 | NASA 14.367 CM | UNITED STATES | WALLOPS ISLAND | | A<br>V<br>F | | | | | | | | | 190 | SMITH, W.S. |
| 02/22/68 | 1102 | NASA 14.208 CA | UNITED STATES | WALLOPS ISLAND | | A<br>V<br>F | | | | | | | | | /68 | SMITH, W.S. |
| 02/22/68 | 1125 | INCOSPAR 25.01 | INDIA | THUMBA | | G | | | | | | | | | 155 | SHIRKE, J.S.<br>POKHUNKOV, A.A. |
| 02/22/68 | 1155 | CENTUARE | INDIA<br>USSR | THUMBA | | G | | | | | | | | | 154 | UNKNOWN |
| 02/23/68 | 0345 | NASA 14.276 GE | UNITED STATES | FORT CHURCHILL | X | | | X | | | | | | | N/A | EVANS, D.S. |
| 02/23/68 | 0510 | NASA 18.35 UE | UNITED STATES | FORT CHURCHILL | | | | D | | | | | | | 293 | ANDERSON, K.A. |
| 02/23/68 | 0653 | NASA 18.67 UA | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | N/A | MURCRAY, W.B. |
| 02/27/68 | 0110 | NASA 14.350 CA | UNITED STATES | WALLOPS ISLAND | C | X | C | | | | | | | | 154 | PRESSMAN, J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/27/68 | 0130 | MP-12 | USSR | KHEISA ISLAND | | A C D | | | | | | | | | 170 | UNKNOWN |
| 02/28/68 | 0601 | NASA 18.68 | UNITED STATES | FORT CHURCHILL | C | | | | | | | | | | 295 | MURCRAY, W. B. |
| 02/28/68 | 1445 | MP-12 | USSR | KHEISA ISLAND | | A C D | | | | | | | | | 168 | UNKNOWN |
| 02/29/68 | 1530 | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | B | | | | | 170 | SHIVANANDAN, K. |
| 02/29/68 | 1715 | MP-12 | USSR | KHEISA ISLAND | B | | | | | | | | | | 170 | UNKNOWN |
| 02/29/68 | 2118 | PC06H | UNITED KINGDOM | SOUTH UIST | | | C E | C | | | | | | | N/A | BRYANT, D. A. |
| 02/30/68 | 0330 | AEROBEE | UNITED STATES | WHITE SANDS | | | | | | B | | | | | 170 | UNKNOWN |
| 03/01/68 | 0330 | NASA 4.177 UG | UNITED STATES | WHITE SANDS | | | | | | | X | | | | 171 | HARWIT, M. |
| 03/02/68 | 0500 | NASA 8.48 UE | UNITED STATES | FORT CHURCHILL | B | | | B | | | | | | | 805 | O'BRIEN, B. J. |
| 03/02/68 | 0719 | NASA 16.37 UE | UNITED STATES | FORT CHURCHILL | B | | | D | | | | | | | 260 | ANDERSON, K. A. |
| 03/06/68 | 1636 | PC07H | UNITED KINGDOM | SOUTH UIST | | | E | B | | | | | | | N/A | WILSON, J. W. G. ROTHWELL, P. |
| 03/06/68 | 2135 | CE-37 | UNITED KINGDOM | KIRUNA | B | | A | | | | | | | | 155 | HULTQUIST, B. BOYD, R. L. F. PETERS, B. |
| 03/07/68 | 2236 | AMD-S2-005 | CANADA | FORT CHURCHILL | | G | | | | | | | | | 68 | SCHIFF, H. I. |
| 03/08/68 | 0635 | NASA 15.58 GI | UNITED STATES | THUMBA | | | C A | | | | | | | | 85 | KANE, J. A. |
| 03/08/68 | 1240 | NASA 15.59 GI | UNITED STATES | THUMBA | | | A C | | | | | | | | 94 | KANE, J. A. |
| 03/12/68 | 1115 | | UNITED STATES | | | | X | | | | | | | | 61 | UNKNOWN |
| 03/13/68 | 1528 | EXAMETNET-30 | ARGENTINA | CHAMICAL | | Y | | | | | | | | | 74 | LICHTENSTEIN, L. E. |
| 03/15/68 | 0710 | AE 07.290 | UNITED STATES | FORT CHURCHILL | | | B | | | | | | | | 160 | HUTCHINSON, R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/15/68 | 1904 | NASA 4.209 CS | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 155 | REIDY, W.P.<br>VAIANA, G.S. |
| 03/15/68 | 1911 | NASA 18.10 UI | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 290 | GOLDBERG, R.A. |
| 03/16/68 | 0315 | NASA 4.198 GE | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 153 | BOLDT, E.<br>SERLEMITSOS, P. |
| 03/16/68 | 1745 | MP-12 | USSR<br>FRANCE | KHEISA ISLAND | | Y<br>V | | | | | | | | | 174 | UNKNOWN |
| 03/17/68 | | NASA 18.49 GA | UNITED STATES | ARECIBO | | C | | | | | | | | | N/A | SPENCER, N.W. |
| 03/17/68 | 0659 | NASA 14.344 UM | UNITED STATES | ARECIBO | | C<br>F | | | | | | | | | 148 | HORVATH, J.J. |
| 03/17/68 | 0730 | NASA 18.53 GA | UNITED STATES | ARECIBO | | C | | | | | | | | | N/A | SPENCER, N.W. |
| 03/17/68 | 1845 | NASA 14.345 UM | UNITED STATES | ARECIBO | | F<br>C | | | | | | | | | N/A | HORVATH, J.J. |
| 03/17/68 | 1918 | NASA 18.52 GA | UNITED STATES | ARECIBO | | C | | | | | | | | | N/A | SPENCER, N.W. |
| 03/18/68 | 0700 | NASA 14.333 UM | UNITED STATES | | | F<br>C | | | | | | | | | 148 | HORVATH, J.J. |
| 03/18/68 | 1751 | NASA 18.36 UE | UNITED STATES | FORT CHURCHILL | B | | | D | | | | | | | N/A | ANDERSON, K.A. |
| 03/18/68 | 2130 | MP-12 | USSR<br>FRANCE | KHEISA ISLAND | | Y<br>V | | | | | | | | | 174 | UNKNOWN |
| 03/18/68 | 2215 | MP-12 | USSR | KHEISA ISLAND | | G<br>B<br>C | | | | | | | | | 181 | UNKNOWN |
| 03/19/68 | 1615 | NASA 4.202 NT | UNITED STATES | WHITE SANDS | | | | | | | | | | C | 159 | HANSEN, M.O. |
| 03/19/68 | 1824 | MP-12 | USSR<br>FRANCE | KHEISA ISLAND | | Y<br>V | | | | | | | | | 176 | UNKNOWN |
| 03/19/68 | 1905 | MP-12 | USSR | KHEISA ISLAND | | G<br>B<br>C | | | | | | | | | 178 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/20/68 | 0457 | SC-4CE | UNITED KINGDOM<br>AUSTRALIA | WOOMERA | | G | | B | | | | | | | 217 | STEWART,K.H.<br>SHENTON,D.B.<br>POUNDS,K.A. |
| 03/20/68 | 1500 | EXAMETNET-31 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 72 | LICHTENSTEIN,L.E. |
| 03/20/68 | 1923 | NIKE APACHE | FED REP OF GERMANY | KIRUNA | | | X | | | | | | | | 207 | HAERENDEL,G. |
| 03/20/68 | 2030 | MP-12 | USSR<br>FRANCE | KHEISA ISLAND | | Y<br>V | | | | | | | | | 174 | UNKNOWN |
| 03/20/68 | 2109 | MP-12 | USSR | KHEISA ISLAND | | G<br>B<br>C | | | | | | | | | 182 | UNKNOWN |
| 03/20/68 | 2136 | MP-12 | USSR | KHEISA ISLAND | | G | | | | | | | | | 175 | UNKNOWN |
| 03/21/68 | 0601 | NASA 18.63 UE | UNITED STATES | FORT CHURCHILL | B | | D | | | | | | | | N/A | MATTHEWS,D.L.<br>WILKERSON,T.D. |
| 03/22/68 | 0057 | MP-12 | USSR | KHEISA ISLAND | C | | | | | | | | | | 176 | UNKNOWN |
| 03/22/68 | 0724 | NASA 4.255 GG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 208 | SMITH,A.M. |
| 03/23/68 | 1835 | NIKE APACHE | FED REP OF GERMANY | KIRUNA | | | X | | | | | | | | 211 | UMLAUFT, |
| 03/23/68 | 1904 | REHBAR-17 | PAKISTAN<br>FRANCE | SONMIANI | | Y<br>V | | | | | | | | | 146 | AHMAD,S.<br>CHANIN,M.L. |
| 03/23/68 | 2025 | MP-12 | USSR | KHEISA ISLAND | | G | D | | | | | | | | 182 | UNKNOWN |
| 03/24/68 | 1245 | NASA 10.270 GM | UNITED STATES | NATAL | | Z | | | | | | | | | 120 | SMITH,W.S. |
| 03/25/68 | 0510 | MP-12 | USSR | KHEISA ISLAND | | G | D | | | | | | | | 180 | UNKNOWN |
| 03/25/68 | 0600 | NASA 10.271 GM | UNITED STATES | NATAL | | Z | | | | | | | | | 120 | SMITH,W.S. |
| 03/25/68 | 0700 | NASA 14.258 II | UNITED STATES<br>INDIA | WALLOPS ISLAND | | | X | | | | | | | | N/A | UNKNOWN |
| 03/25/68 | 1258 | NASA 10.272 GM | UNITED STATES | NATAL | | Z | | | | | | | | | 120 | SMITH,W.S. |
| 03/25/68 | 1920 | MP-12 | USSR | KHEISA ISLAND | | B<br>C<br>F | | | | | | | | | 181 | UNKNOWN |

| DATE (UT) | TIME (UT.) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/25/68 | 2114 | P.008H | UNITED KINGDOM | SOUTH UIST | | | E | B | | | | | | | 135 | WILSON,J.W.G.<br>ROTHWELL,P. |
| 03/25/68 | 2240 | MP-12 | USSR | KAPUSTIN YAR. | | G | | | | | | | | | 175 | UNKNOWN |
| 03/26/68 | 2341 | SK-23 | UNITED KINGDOM | KIRUNA | | | E | | | | | | | | 171 | BOYD,R.L.F.<br>HALL,S.H. |
| 03/27/68 | | S16/1 | UNITED KINGDOM<br>SWEDEN | KIRUNA | B | | C | | | | | | | | N/A | UNKNOWN |
| 03/27/68 | 0440 | AAF-5B-004 | CANADA | FORT CHURCHILL | B | | C | D | | D | | A | | | 290 | BUDZINSKI,E.E.<br>JUDGE,R.J.<br>MCEWEN,D.J.<br>KAVADAS,A. |
| 03/27/68 | 1150 | MP-12 | USSR | KAPUSTIN YAR. | | V | | | | | | | | | 179 | UNKNOWN |
| 03/27/68 | 1558 | EXAMETNET-32 | ARGENTINA | CHAMICAL | | Y | | | | | | | | | 75 | LICHTENSTEIN,L.E. |
| 03/28/68 | 1355 | NIKE APACHE | FED REP OF GERMANY<br>UNITED STATES | THUMBA | | | X | | | | | | | | 211 | UNKNOWN |
| 03/28/68 | 1631 | NASA 14.346 GP | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | C | 161 | STONE,R.G. |
| 03/29/68 | 0645 | NE 3.171 | UNITED STATES | WHITE SANDS | C | | | | | | B | | | | 220 | SHIVANANDAN,K.<br>MCNUTT,D.P.<br>FELDMAN,P.D. |
| 03/29/68 | 0829 | AE 03.154 | UNITED STATES | WHITE SANDS | | F<br>G | | | | | | | | | 122 | LEBLANC,F.S.<br>JURSA,A.S. |
| 03/29/68 | 1353 | S08H | UNITED KINGDOM | SOUTH UIST | | B | A<br>C | | | | | | | | 88 | WILLIAMS,E.R. |
| 03/29/68 | 1920 | SHAMPAR-02 | PAKISTAN<br>FRANCE | SONMIANI | | C | | | | | | | | | 420 | CHANIN,M.L.<br>AHMAD,M.S. |
| 03/30/68 | 0800 | MP-12 | USSR | KAPUSTIN YAR | | | C<br>E | | | | | | | | 170 | UNKNOWN |
| 03/30/68 | 1355 | NIKE APACHE | FED REP OF GERMANY<br>UNITED STATES | THUMBA | | | X | | | | | | | | 205 | NEUSS,H. |
| 03/30/68 | 1430 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 176 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/31/68 | 0037 | NIKE APACHE | FED REP OF GERMANY<br>UNITED STATES | THUMBA | | | X | | | | | | | | 211 | MELZNER,F. |
| 03/31/68 | 1245 | NIKE APACHE | FED REP OF GERMANY<br>UNITED STATES | THUMBA | | | X | | | | | | | | 160 | UNKNOWN |
| 04/03/68 | 0538 | REHBAR-18 | PAKISTAN<br>FRANCE | SONMIANI | | V<br>Y | | | | | | | | | 146 | CHANIN,M.L.<br>AHMAD,M.S. |
| 04/03/68 | 1339 | EXAMETNET-33 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 70 | LICHTENSTEIN,L.E. |
| 04/03/68 | 1348 | AAF-58-005 | CANADA | FORT CHURCHILL | B | | C | D | | | | A | | | 316 | BUDZINSKI,E.E.<br>MCEWEN,D.J.<br>KAVADAS,A. |
| 04/04/68 | 0359 | NASA 14.277 GE | UNITED STATES | FORT CHURCHILL | B | | B<br>C | | | | | | | | 129 | EVANS,D.S. |
| 04/04/68 | 0732 | NASA 18.60 GE | UNITED STATES | FORT CHURCHILL | B | | B<br>C | | | | | | | | N/A | EVANS,D.S. |
| 04/06/68 | 0245 | AAF-4 -010 | CANADA | FORT CHURCHILL | | | C | B | | | | | | | 862 | WILSON,B.G.<br>MCNAMARA,A.G.<br>FORSYTH,P.A. |
| 04/07/68 | 0545 | NB 3.204 | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 158 | BYRAM,E.T. |
| 04/09/68 | | | FRANCE | KOUROU | | | | | | | | | | | 114 | UNKNOWN |
| 04/09/68 | 2126 | NA 8.40 UA | UNITED STATES | WALLOPS ISLAND | D | | D | | | | | | | | 800 | DAMON,K.R.<br>JUDGE,D.L. |
| 04/10/68 | 0210 | EXAMETNET-34 | ARGENTINA | CHAMICAL | | Y | | | | | | | | | 75 | LICHTENSTEIN,L.E. |
| 04/16/68 | 0358 | AKD-2 -113 | CANADA | FORT CHURCHILL | B | G | C<br>E | | | | | | | | 155 | SCHIFF,H.I.<br>SHEPHERD,G.G.<br>MCNAMARA,A.G. |
| 04/17/68 | 1626 | EXAMETNET-35 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 72 | LICHTENSTEIN,L.E. |
| 04/17/68 | 2013 | NASA 12.10 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | N/A | WOOD,J.F. |
| 04/18/68 | 0542 | AKD-2 -110 | CANADA | FORT CHURCHILL | B | G | C<br>E | | | | | | | | 152 | WHALEN,B.A.<br>SHEPHERD,G.G.<br>MCNAMARA,A.G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/18/68 | 0614 | AKD-2 -112 | CANADA | FORT CHURCHILL | B | G | C E | | | | | | | | 155 | SCHIFF,H.I.<br>SHEPHERD,G.G.<br>MCNAMARA,A.G. |
| 04/23/68 | 0447 | AMF-2 -115 | CANADA | FORT CHURCHILL | B | G | C E | | | | D | | | | 337 | SCHIFF,H.I.<br>MCEWEN,D.J.<br>MCNAMARA,A.G. |
| 04/23/68 | 2306 | NA 4.238 UA | UNITED STATES | WHITE SANDS | D | D | | B | | D | | | | | 185 | BARTH,C.<br>DIGGIN,L. |
| 04/24/68 | 0453 | NASA 18.39 UE | UNITED STATES | FORT CHURCHILL | B | | B | | B | | | | | | 268 | CAHILL,L.J.<br>MCILWAIN,C.E. |
| 04/24/68 | 1029 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 85 | UNKNOWN |
| 04/24/68 | 1237 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 82 | UNKNOWN |
| 04/25/68 | 0601 | NASA 18.33 UI | UNITED STATES | FORT CHURCHILL | | | B | D | B | | | | | | 120 | BERNSTEIN,W. |
| 04/25/68 | 0623 | NASA 18.40 UE | UNITED STATES | FORT CHURCHILL | B | | B | | B | | | | | | 262 | CAHILL,L.J.<br>MCILWAIN,C.E. |
| 04/27/68 | 1505 | NASA 4.244 DS | UNITED STATES | WHITE SANDS | | | | | | E C | | | | | 166 | TOUSEY,R.<br>KOOMEN,M.J. |
| 04/29/68 | 0300 | AMD-S2-007 | CANADA | FORT CHURCHILL | | G | | B | | | | | | | 72 | SCHIFF,H.I. |
| 04/29/68 | 1500 | NASA 4.245 DS | UNITED STATES | WHITE SANDS | | | | | | E C | | | | | 169 | KOOMEN,M.J. |
| 04/29/68 | 2304 | AMD-S2-008 | CANADA | FORT CHURCHILL | | G | | B | | | | | | | 74 | SCHIFF,H.I. |
| 04/30/68 | 0749 | NASA 18.41 UE | UNITED STATES | FORT CHURCHILL | B | | B | | B | | | | | | 109 | POTTER,W.E.<br>DAVE,A.<br>REARWIN,S. |
| 04/30/68 | 1100 | AMD-S2-006 | CANADA | FORT CHURCHILL | | G | | B | | | | | | | 58 | SCHIFF,H.I. |
| 05/01/68 | 2025 | AH C7.177 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 217 | FAIRE,A.C. |
| 05/02/68 | 0915 | AG07.644 | UNITED STATES | ARECIBO | | V | | | | | | | | | 218 | ROSENBERG,N.W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/03/68 | 0511 | NASA 18.42 UE | UNITED STATES | FORT CHURCHILL | B | | B | | B | | | | | | 258 | POTTER,W.E.<br>DAVE,A.<br>REARWIN,S. |
| 05/03/68 | 0715 | NA 4.227 UG | UNITED STATES | WHITE SANDS | | | | | | | E | | | | 171 | MORTON,D.C. |
| 05/07/68 | 0510 | NASA 19.04 II | UNITED STATES | WALLOPS ISLAND | | | ACE | | | | | | | | 820 | BARRINGTON,R.E. |
| 05/07/68 | 0900 | AF 07.643 | UNITED STATES | ARECIBO | | V | | | | | | | | | 142 | ROSENBERG,N.W. |
| 05/08/68 | 1147 | CE-C46 | FED REP OF GERMANY | SARDINIA | | | | X | | | | | | | 53 | DIEMINGER,W.E. |
| 05/09/68 | 0615 | NIKE-TOMAHAWK | UNITED STATES | BARKING SANDS | | | | | | | X | | | | 178 | UNKNOWN |
| 05/09/68 | 0730 | MP-12 | USSR | 21D 41'N 033D 20'E | | V | | | | | | | | | 162 | INST OF EXPERI-<br>MENTAL METEOROLOGY |
| 05/11/68 | 0100 | MP-12 | USSR | 10D 15'N 034D 48'E | | G | D | | | | | | | | 167 | INST OF EXPERI-<br>MENTAL METEOROLOGY |
| 05/11/68 | 1300 | MP-12 | USSR | 10D 02'N 035D 18'E | | G | D | | | | | | | | 167 | INST OF EXPERI-<br>MENTAL METEOROLOGY |
| 05/12/68 | 1315 | AG C7.644 | USSR | 10D 02'N 035D 18'E | | G | D | | | | | | | | 171 | INST. OF EXP. MET. |
| 05/12/68 | 1315 | MP-12 | USSR | 10D 02'N 035D 18'E | | G | D | | | | | | | | 171 | UNKNOWN |
| 05/13/68 | 0908 | AH C8.670 | UNITED STATES | | | V | | | | | | | | | 153 | ROSENBERG,N.W. |
| 05/13/68 | 1006 | AH C8.666 | UNITED STATES | ARECIBO | | V | | | | | | | | | 170 | ROSENBERG,N.W. |
| 05/13/68 | 1008 | AH C6.670 | UNITED STATES | ARECIBO | | V | | | | | | | | | 210 | UNKNOWN |
| 05/15/68 | 0638 | | UNITED STATES | BARKING SANDS | | | | | | F | | | | | 100 | HARRI,J.<br>CORNELL,C. |
| 05/15/68 | 1224 | CE-C47 | FED REP OF GERMANY | SARDINIA | | | | X | | | | | | | 805 | DIEMINGER,W.E. |
| 05/15/68 | 1955 | EXAMETNET-36 | ARGENTINA | MAR CHIQUITA | | A | | | | | | | | | 68 | LICHTENSTEIN,L.E. |
| 05/16/68 | 1933 | MP-12 | USSR | 11D 57'N 035D 12'E | | G | | | | | | | | | 168 | INST OF EXPERI-<br>MENTAL METEOROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/17/68 | 0345 | KP 3.24 | UNITED STATES | WHITE SANDS | | | | | | | X | | | | 159 | BROADFOOT,A.L. |
| 05/17/68 | 0432 | NASA 4.221 GG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 165 | KONDO,Y. |
| 05/17/68 | 0900 | AH 07.571 | UNITED STATES | BARKING SANDS | | Y | | | | | | | | | 202 | FAUCHER,G.A. |
| 05/17/68 | 1825 | MP-12 | USSR | 11D 07'N 020D 04'E | | G | | | | | | | | | 159 | INST OF EXPERIMENTAL METEOROLOGY |
| 05/18/68 | 1805 | MP-12 | USSR | 10D 52'N 024D 59'E | | G | | | | | | | | | 167 | INST OF EXPERIMENTAL METEOROLOGY |
| 05/19/68 | 0616 | NIKE TOMAHAWK | UNITED STATES | BARKING SANDS | | | | | | | X | | | | 147 | UNKNOWN |
| 05/20/68 | 1500 | NASA 4.230 GS | UNITED STATES | WHITE SANDS | | | | | | | | X | | | 165 | FREDGA,K. |
| 05/20/68 | 1551 | CE-C3E | SWEDEN | KIRUNA | | | | | | | | A | | | 135 | |
| 05/20/68 | 1620 | ESROC42/C01 | UNITED STATES | KIRUNA | | | | | | | | A | | | 135 | UNKNOWN |
| 05/21/68 | 1400 | MP-12 | USSR | 21D 38'N 020D 08'E | | G | D | | | | | | | | 174 | INST OF EXPERIMENTAL METEOROLOGY |
| 05/21/68 | 2009 | MP-12 | USSR | 23D 27'N 020D 08'E | | G | | | | | | | | | 167 | INST OF EXPERIMENTAL METEOROLOGY |
| 05/22/68 | 0050 | MP-12 | USSR | 24D 23'N 015D 59'E | | G | D | | | | | | | | 169 | INST OF EXPERIMENTAL METEOROLOGY |
| 05/22/68 | 1729 | CE-C31 | FED REP OF GERMANY | SARDINIA | | | | B | | F | | | | | N/A | OSTER,A.<br>DEJAGER,C.<br>ZAHRINGER,J.<br>TER,A.<br>DE JAEGER,C.<br>ZAHRINGER,J. |
| 05/22/68 | 2100 | AH 07.572 | UNITED STATES | BARKING SANDS | | Y | | | | | | | | | 201 | FAUCHER,G.A. |
| 05/25/68 | 0519 | NA 8.46 UI | UNITED STATES | FORT CHURCHILL | | | B | | B | A | | | | | 805 | GURNETT,D.A.<br>FRANK,L.A. |
| 05/25/68 | 0640 | NASA 4.173 UG | UNITED STATES | WHITE SANDS | | | | | | | E | | | | 169 | BLESS,R.C. |
| 05/29/68 | 1730 | EXAMETNET-37 | ARGENTINA | MAR CHIQUITA | | A | | | | | | | | | 71 | LICHTENSTEIN,L.E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/30/68 | 1332 | MP-12 | USSR | KAPUSTIN YAR | | Y | | | | | | | | | 172 | CENTRAL AEROLOGICAL OBSERVATORY |
| 05/30/68 | 2100 | MP-12 | USSR | KAPUSTIN YAR | B | | | | | | | | | | 168 | INST OF EXPERIMENTAL METECROLOGY |
| 05/31/68 | 0849 | SL-762 | UNITED KINGDOM AUSTRALIA | WOOMERA | | Z V | | | | | | | | | 242 | REES,D. J. |
| 05/31/68 | 2039 | SL-761 | UNITED KINGDOM AUSTRALIA | WOOMERA | | Z V | | | | | | | | | 238 | REES,D. J. |
| 06/01/68 | 1750 | P018H | UNITED KINGDOM | SOUTH UIST | | | C E | | | | | | | | 131 | BULLOUGH,K. |
| 06/04/68 | 1030 | SL-723 | UNITED KINGDOM | WOOMERA | | | | | | | F | | | | 184 | POUNDS,K. A. |
| 06/04/68 | 1637 | NASA 14.363 GT | UNITED STATES | WHITE SANDS | | | | | | | | | | A | 130 | WOOD,J. F. |
| 06/06/68 | 1331 | MP-12 | USSR | KAPUSTIN YAR | | Y | D | | | | | | | | 174 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/06/68 | 1800 | MP-12 | USSR | KAPUSTIN YAR | | Y | | D | | | | | | | 171 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/07/68 | 1520 | ESROC42/002 | UNITED STATES | KIRUNA | | | | | | | | A | | | 128 | UNKNOWN |
| 06/07/68 | 1526 | CE-C44 | SWEDEN | KIRUNA | | | | | | | | A | | | 131 | LINDBLAD,B. A. GENTNER,W. |
| 06/08/68 | 1741 | NASA 4.263 CS | UNITED STATES | WHITE SANDS | | | | | | E F | | | | | 151 | REIDY,W. P. VARANA,G. S. |
| 06/08/68 | 2101 | ESROC32/ | UNITED STATES | KIRUNA | | | | | | | | A B | | | 135 | LINDBLAD,B. A. GENTNER,W. WITT,G. |
| 06/10/68 | 1715 | NASA 14.335 UA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 152 | HEMENWAY,C. L. |
| 06/11/68 | 1721 | NASA 14.355 IA | UNITED STATES | KIRUNA | | | B | | | | | A | | | 183 | SITTE,K. |
| 06/11/68 | 2330 | NASA 19.01 NE | UNITED STATES | NATAL | | | | B | | | | | | | 790 | BRANDON,G. MCCOY,J. E. |
| 06/12/68 | 2259 | NASA 14.354 IA | UNITED STATES | KIRUNA | | | B | | | | | A | | | 183 | SITTE,K. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/13/68 | 1820 | EXAMETNET-38 | ARGENTINA | MAR CHIQUITA | | Y | | | | | | | | | 62 | LICHTENSTEIN,L.E. |
| 06/14/68 | 1455 | MP-12 | USSR | KAPUSTIN YAR | | G | | B | | | | | | | 169 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/22/68 | 1515 | S04H | UNITED KINGDOM | SOUTH UIST | | | C E | | | F | | | | | 101 | WILLMORE,A.F. GILMORE,D.J. |
| 06/24/68 | 2251 | NASA 4.214 NB | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | X | 144 | DETWILER,D. LANGE,K.O. |
| 06/26/68 | 0430 | MP-12 | USSR | KAPUSTIN YAR | | Y | | | | | | | | | 173 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/26/68 | 0921 | MP-12 | USSR | KAPUSTIN YAR | | Y | | | | | | | | | 168 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/26/68 | 1650 | EXAMETNET-39 | ARGENTINA | MAR CHIQUITA | | A | | | | | | | | | 69 | LICHTENSTEIN,L.E. |
| 06/28/68 | 0437 | MP-12 | USSR | KAPUSTIN YAR | | Y | | | | | | | | | 174 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/28/68 | 2032 | AD 21.860 | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | B | N/A | ROTMAN,W. |
| 07/02/68 | 1343 | S05H | UNITED KINGDOM | SOUTH UIST | | | C E | | | F | | | | | N/A | WILLMORE,A.F. GILMORE,D.J. |
| 07/03/68 | | MP-12 | USSR | KAPUSTIN YAR | | G | | B | | | | | | | 179 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/08/68 | 0605 | SL-403 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | | | | | F | | | | 180 | POUNDS,K.A. |
| 07/08/68 | 1455 | S06H | UNITED KINGDOM | SOUTH UIST | | | C E | | | F | | | | | 100 | WILLMORE,A.F. GILMORE,D.J. |
| 07/09/68 | 1700 | M-100 | USSR | 42D 08'N 013D 46'E | | J | | | | | | | | | 92 | HYDROMETECROLOGICAL SERVICE |
| 07/10/68 | 0300 | | USSR | KAPUSTIN YAR | | J | | | | | | | | | 100 | UNKNOWN |
| 07/16/68 | 0145 | EXAMETNET-40 | ARGENTINA | MAR CHIQUITA | | Y | | | | | | | | | 56 | LICHTENSTEIN,L.E. |
| 07/16/68 | 1740 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 146 | INST OF EXPERIMENTAL METECROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE(KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/17/68 | 0130 | AG 07.881 | UNITED STATES | EGLIN AFB | | G | | | | | | | | | 125 | NARCISI,R.S. |
| 07/17/68 | 0825 | NASA 10.294 GM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 201 | SMITH,W.S.<br>BEDINGER,J.F. |
| 07/17/68 | 0908 | NASA 10.295 GM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 209 | SMITH,W.S.<br>BEDINGER,J.F. |
| 07/19/68 | 1700 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 148 | INST OF EXPERI-<br>MENTAL METEOROLOGY |
| 07/23/68 | 0418 | AG 07.628 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 158 | MACLEOD,M.A. |
| 07/23/68 | 0418 | AG 07.629 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 150 | NARCISI,R.S. |
| 07/23/68 | 0423 | AF 07.389 | UNITED STATES | EGLIN AFB | | A | D | | | | | | | | 142 | NARCISI,R.S.<br>ROSENBERG,N.W. |
| 07/23/68 | 0428 | AG 07.632 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 150 | MACLEOD,M.A. |
| 07/23/68 | 0428 | AG 07.642A | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 200 | NARCISI,R.S. |
| 07/24/68 | 0019 | NASA 14.349 UA | UNITED STATES | WALLOPS ISLAND | E | G | D | | | | | | | | 106 | PEARCE,J.B. |
| 07/24/68 | 0046 | NASA 10.265 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 126 | SMITH,W.S. |
| 07/24/68 | 0141 | SL-523 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | C | | | | | | | | 258 | BENYON,W.J.G. |
| 07/24/68 | 0500 | NASA 10.253 UA | UNITED STATES | WALLOPS ISLAND | | X | | | | | | | | | 155 | DUBIN,M.<br>PETERSON,J. |
| 07/24/68 | 0954 | NASA 14.348 UA | UNITED STATES | WALLOPS ISLAND | E | G | D | | | | | | | | 105 | PEARCE,J.B. |
| 07/24/68 | 0954 | NASA 14.348 UA | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | | 105 | DUBIN,M.<br>BARTH,C.A. |
| 07/24/68 | 1006 | NASA 14.358 UI | UNITED STATES | WALLOPS ISLAND | | | A<br>B<br>C | B | | | | | | | 206 | SMITH,L.G.<br>BOWHILL,S.A. |
| 07/24/68 | 1019 | NASA 10.258 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 117 | SMITH,W.S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/24/68 | 1036 | NASA 14.359 UI | UNITED STATES | WALLOPS ISLAND | | | A<br>B<br>C | B | | | | | | | 211 | BOWHILL,S.A.<br>SMITH,L.G. |
| 07/24/68 | 1700 | NASA 14.360 UI | UNITED STATES | WALLOPS ISLAND | | | A<br>B<br>C | B | | | | | | | 214 | SMITH,L.G.<br>BOWHILL,S.A. |
| 07/24/68 | 1830 | NASA 10.254 UA | UNITED STATES | WALLOPS ISLAND | | X | | | | | | | | | 159 | DUBIN,M.<br>PETERSON,J. |
| 07/24/68 | 2136 | NASA 14.361 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>A | B | | | | | | | 206 | BOWHILL,S.A.<br>SMITH,L.G. |
| 07/24/68 | 2155 | NASA 10.266 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 84 | SMITH,W.S. |
| 07/25/68 | 1730 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 145 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/26/68 | 0000 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 147 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/27/68 | 0355 | NA 4.236 UG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 142 | NOVICK,R. |
| 07/27/68 | 0430 | NA 4.225 UG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 135 | BRADT,H.V. |
| 07/27/68 | 1726 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | N/A | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/30/68 | 2253 | CE-C31 | SWEDEN | KIRUNA | | G | | | | | | | | | 135 | WITT,G. |
| 07/31/68 | 1300 | MP-12 | USSR | KAPUSTIN YAR | | | | B | | | | | | | 178 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/31/68 | 1854 | MP-12 | USSR | VOLGOGRAD | | | | B | | | | | | | 173 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/31/68 | 2121 | NASA 18.31 UA | UNITED STATES | WALLOPS ISLAND | C | | C | | | | | | | | 300 | EASTIE,W.G.<br>MATTHEWS,D.L. |
| 07/31/68 | 2228 | EXAMETNET-41 | ARGENTINA | MAR CHIQUITA | | A | | | | | | | | | 65 | LICHTENSTEIN,L.E. |
| 08/01/68 | 0000 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 168 | UNKNOWN |
| 08/01/68 | 0000 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 168 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/01/68 | 0200 | MP-12 | USSR | KAPUSTIN YAR | | | | X | X | | | | | | 176 | UNKNOWN |
| 08/01/68 | 0910 | NA 4.224 NA | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 115 | FARLOW, N. H. |
| 08/01/68 | 1027 | P013H | UNITED KINGDOM | SOUTH UIST | | | C<br>A | | | E<br>F | | | | | 93 | HALL, J. E.<br>BRYANT, D. A. |
| 08/01/68 | 2020 | BLACK BRANT VB | FED REP OF GERMANY<br>CANADA | FORT CHURCHILL | X | | X | | | | | | | | 380 | NEUSS, H. |
| 08/02/68 | 0218 | NASA 15.52 GI | UNITED STATES | RESOLUTE BAY | | | C | | | | | | | | N/A | KANE, J. A. |
| 08/02/68 | 0619 | ADD-SB-018 | CANADA | FORT CHURCHILL | | V | B<br>C<br>E | | B | | | | | | 277 | KAVADAS, A.<br>MCNAMARA, A. G.<br>MCEWEN, D. J. |
| 08/02/68 | 1031 | NASA 15.34 GI | UNITED STATES | RESOLUTE BAY | | | C<br>D | | | | | | | | N/A | KANE, J. A. |
| 08/05/68 | | SL-524 | UNITED KINGDOM<br>AUSTRALIA | WOOMERA | | | C | | | | | | | | 235 | UNKNOWN |
| 08/05/68 | 0159 | NASA 14.343 UA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 149 | HEMENWAY, C. L.<br>WOOD, J. F. |
| 08/06/68 | 0155 | SL-524 | UNITED KINGDOM | WOOMERA | | | A<br>C | | | | | | | | 234 | WILLIAMS, E. R. |
| 08/06/68 | 1843 | AG 03.532 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 127 | HINTEREGGER, H. E.<br>HIGGINS, J. E. |
| 08/06/68 | 1843 | AG 03.527 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 129 | UNKNOWN |
| 08/07/68 | 1205 | NASA 14.320 UE | UNITED STATES | WALLOPS ISLAND | | | B | | A | | | | | | 196 | HAYMES, R. C. |
| 08/07/68 | 1312 | SC9H | UNITED KINGDOM | SOUTH UIST | | B | C<br>A | | | | | | | | 93 | WILLIAMS, E. R. |
| 08/08/68 | 0900 | AG 07.273 | UNITED STATES | NATAL | | | | | | | | A | | | 158 | SKRIVANEK, R.<br>CARNEVALE, R.<br>RYAN, T.<br>CHREST, S. |
| 08/08/68 | 1910 | NASA 16.51 GA | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | | 286 | CARIGNAN, G. R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/08/68 | 1935 | NASA 14.187 UM | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | | 152 | HORVATH, J. J. |
| 08/09/68 | 0702 | NASA 18.56 GA | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | | 320 | CARIGNAN, G. R. |
| 08/09/68 | 0724 | NASA 14.357 UM | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | | 146 | HORVATH, J. J. |
| 08/12/68 | | ESRO A50/002 | UNITED KINGDOM | KIRUNA | | | C | | | | | | | | N/A | UNKNOWN |
| 08/12/68 | 0838 | NASA 14.336 UA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 155 | HEMENWAY, C. L. |
| 08/12/68 | 0900 | AG 07.275 | UNITED STATES | NATAL | | | | | | | | A | | | 153 | SKRIVANEK, R.<br>CARNEVALE, R.<br>RYAN, T.<br>CHREST, S. A. |
| 08/12/68 | 1204 | AE-007 | UNITED KINGDOM<br>DENMARK | KIRUNA | | | X | X | X | | | | | | 96 | BOYD, R. L. F.<br>PETERS, B. |
| 08/14/68 | 1600 | M-100 | USSR | 10D 00'S 065D 00'E | | J | | | | | | | | | 93 | HYDROMETEOROLOGICAL SERVICE |
| 08/14/68 | 2328 | EXAMETNET-42 | ARGENTINA | MAR CHIQUITA | | Y | | | | | | | | | 48 | LICHTENSTEIN, L. E. |
| 08/15/68 | 0759 | AE 03.725 | UNITED STATES | FORT CHURCHILL | | | | B | | | | | | | 179 | WALKER, R. G.<br>CUNIFF, C. |
| 08/19/68 | 0917 | AG 07.636 | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 177 | GOLOMB, D.<br>GOOD, R.<br>DYER, G.<br>KITROSSER, D. |
| 08/20/68 | 0800 | AG 08.649 | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 194 | GOLOMB, D.<br>GOOD, R.<br>DYER, G.<br>KITROSSER, D. |
| 08/20/68 | 1910 | AG 07.685 | UNITED STATES | FORT CHURCHILL | | V | | | | | | | | | 175 | GOLOMB, D.<br>GOOD, R.<br>DYER, G.<br>KITROSSER, D. |
| 08/20/68 | 1932 | NASA 14.301 UA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 154 | HEMENWAY, C. L. |
| 08/21/68 | 1940 | NASA 14.369 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 193 | AIKIN, A. C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/21/68 | 1953 | NASA 14.368 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 189 | AIKIN,A.C. |
| 08/21/68 | 2004 | NASA 14.370 GI | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | 192 | AIKIN,A.C. |
| 08/21/68 | 2130 | NASA 18.30 UI | UNITED STATES | WALLOPS ISLAND | | | X | | | | | | | | 262 | BETTINGER,R.T.<br>SMITH,L.G. |
| 08/23/68 | 0548 | SANDHAWK | UNITED STATES | TONOPAH TEST RANGE | | | | | | | X | | | | 187 | UNKNOWN |
| 08/23/68 | 1700 | M-10C | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 08/25/68 | 1641 | AE-CC8 | UNITED KINGDOM<br>DENMARK | KIRUNA | | | C<br>A | | | | | | | | 109 | BOYD,R.L.F.<br>PETERS,B. |
| 08/27/68 | 0345 | AH C8.668 | UNITED STATES | FORT CHURCHILL | | V<br>Y | | | | | | | | | 201 | GOLOMB,D.<br>GOOD,R.<br>DYER,G.<br>KITROSSER,D. |
| 08/27/68 | 0345 | AH C7.667 | UNITED STATES | FORT CHURCHILL | | V<br>Y | | | | | | | | | 201 | GOLOMB,D.<br>GOOD,R.<br>DYER,G.<br>KITROSSER,D. |
| 08/28/68 | 2240 | EXAMETNET-43 | ARGENTINA | CHAMICAL | | A | | | | | | | | | 68 | LICHTENSTEIN,L.S. |
| 08/29/68 | 0538 | INCOSPAR 20.06 | INDIA | THUMBA | | | B | | | | | | | | 170 | SASTRY,T.S.G.<br>PRAKASH,S. |
| 08/29/68 | 0845 | INCOSPAR 20.07 | INDIA | THUMBA | | | B | | | | | | | | 170 | SASTRY,T.S.G.<br>PRAKASH,S. |
| 08/29/68 | 1730 | INCOSPAR 20.08 | INDIA | THUMBA | | | B | | | | | | | | 170 | SASTRY,T.S.G.<br>PRAKASH,S. |
| 08/29/68 | 1943 | SL-EC1 | UNITED KINGDOM<br>AUSTRALIA | WOOMERA | | | C<br>D | | | D | | | | | 210 | WAGER,J.H.<br>TIMOTHY,G. |
| 09/04/68 | 0104 | AD C7.913-01 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 227 | FAIRE,A.C. |
| 09/04/68 | 1450 | NA 4.130 UA | UNITED STATES | WHITE SANDS | | G | | | | | | | | | 124 | MARTELL,E.A. |
| 09/12/68 | 2000 | M-10C | USSR | 47D 00'S 065D 00'E | | J | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/13/68 | 1431 | NASA 12.14 GT | UNITED STATES | WHITE SANDS | | | | | | | | | | A | N/A | KRAFT,G.E.<br>BUSSE,J.R. |
| 09/13/68 | 1658 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 155 | INST OF EXPERI-<br>MENTAL METEOROLOGY |
| 09/15/68 | 0200 | MT-135-3E | JAPAN | KAGOSHIMA | | Y | | | | | | | | | 55 | SAKAI,I.<br>ARIZUMI,N.<br>KOBANE,S. |
| 09/15/68 | 0518 | AO 03.903-01 | JAPAN | KAGOSHIMA | | Y | | | | | | | | | 56 | SAKAI,I.<br>ARIZUMI,N.<br>KOBANE,S. |
| 09/16/68 | 1550 | AT 03.170 | UNITED STATES | WHITE SANDS | | | | | | | | | | A | 12 | UNKNOWN |
| 09/16/68 | 1558 | NASA 10.235 GM | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | | 69 | HILSENRATH,E. |
| 09/16/68 | 1712 | NASA 10.269 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 118 | SMITH,W.S. |
| 09/16/68 | 1807 | NASA 15.60 DM | UNITED STATES | WALLOPS ISLAND | | G | | | | D | | | | | 55 | KRUEGER,A.J. |
| 09/17/68 | 2003 | | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | UNKNOWN |
| 09/18/68 | 0730 | NASA 10.282 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | N/A | SMITH,W.S. |
| 09/20/68 | 1630 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 155 | INST OF EXPERI-<br>MENTAL METEOROLOGY |
| 09/20/68 | 1917 | NASA 12.16 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 43 | PEDOLSKY,H.R. |
| 09/20/68 | 1931 | NASA 18.75 GE | UNITED STATES | ANDOYA | | V | | | B | | | | | | N/A | WESCOTT,E. |
| 09/20/68 | 1932 | NIKE-TOMAHAWK | UNITED KINGDOM<br>NORWAY<br>DENMARK<br>SWEDEN | ANDOYA | X | | X | X | X | | | | | | 239 | LANDMARK,B.<br>FOLKESTAD,K.<br>SKOVLI,G.<br>JESPERSEN,M.<br>OLESEN,O.H.<br>BURROWS,D.K. |
| 09/20/68 | 1932 | NASA 18.58 IE | UNITED STATES<br>NORWAY | ANDOYA | | | C<br>A<br>D | D | A | | | | | | 239 | JENSEN,J.<br>LANDMARK,B. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/21/68 | 0345 | NA 4.174 UG | UNITED STATES | WHITE SANDS | | | | | | | D F | | | | 173 | CODE;A.D.<br>BLESS;R.C. |
| 09/21/68 | 1600 | M-100 | USSR | 26D 00'S 065D 00'E | | J | | | | | | | | | 94 | HYDROMETEOROLOGICAL SERVICE |
| 09/21/68 | 1936 | NASA 18.76 GE | UNITED STATES | ANDOYA | B | V | | | B | | | | | | N/A | WESCOTT;E. |
| 09/22/68 | 1530 | NASA 4.246 DS | UNITED STATES | WHITE SANDS | | | | | | D E | | | | | 189 | KOCMEN,M.J.<br>TOUSEY,R. |
| 09/23/68 | 1930 | NASA 18.77 GE | UNITED STATES | ANDOYA | | V | | | B | | | | | | N/A | WESCOTT;E. |
| 09/25/68 | 2202 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 180 | INST OF EXPERIMENTAL METEOROLOGY |
| 09/27/68 | | NASA 10.281 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | N/A | SMITH,M.S. |
| 09/30/68 | 1930 | NASA 4.231 GS | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 203 | BEHRING;W.E. |
| 10/01/68 | 1852 | NASA 4.241 UA | UNITED STATES | WHITE SANDS | | G | | | | | D | | | | 174 | BARTH;C.A. |
| 10/01/68 | 2144 | NIKE-TOMAHAWK | UNITED KINGDOM<br>NORWAY<br>DENMARK | ANDOYA | X | | X | X | X | | | | | | 230 | LANDMARK;B.<br>ARMSTRONG;R.<br>FOLKESTAD;K.<br>MASEIDE;K.<br>SKOVLI,G.<br>ARSNES;K.<br>JESPERSEN;M.<br>OLESEN;O.H.<br>BRYANT;D.<br>TROIM,J. |
| 10/01/68 | 2144 | NASA 18.59 IE | UNITED STATES<br>NORWAY | ANDOYA | B | | | | | | | | | | 228 | JENSEN,J.<br>LANDMARK;B. |
| 10/02/68 | 0217 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 174 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/07/68 | 2140 | SK-28 | UNITED KINGDOM | SARDINIA | | | A | | | | D E | | | | 168 | BUTLER;H.E. |
| 10/08/68 | 0226 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 125 | INST OF EXPERIMENTAL METEOROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/08/68 | 0507 | AKF-3 -040 | CANADA | RESOLUTE BAY | | | C | B | | F | | | | | 153 | BELROSE,J.S.<br>MCNAMARA,A.G. |
| 10/08/68 | 1143 | CE-46 | UNITED KINGDOM | KIRUNA | B | | | | | | G | | | | 140 | BRINI,D.<br>PAGE,D.E. |
| 10/09/68 | 0320 | AKF-3 -039 | CANADA | RESOLUTE BAY | | | C | B | | F | | | | | N/A | BELROSE,J.S.<br>MCNAMARA,A.G. |
| 10/09/68 | 0332 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 130 | INST OF EXPERI-MENTAL METEOROLOGY |
| 10/09/68 | 0806 | MP-12 | USSR | KHEISA ISLAND | | G | | | | | | | | | 173 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 10/10/68 | 1900 | ARCAS | UNITED STATES | WHITE SANDS | | J | | | | | | | | | N/A | UNKNOWN |
| 10/15/68 | 0100 | NASA 10.287 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 129 | SMITH,W.S. |
| 10/15/68 | 0300 | NASA 10.288 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 179 | SMITH,W.S. |
| 10/15/68 | 1632 | CE-35 | FRANCE | KIRUNA | | Z<br>V | | | | | | | | | 160 | BLAMONT,J.E.<br>GROVES,G.V.<br>JAESCHKE,R. |
| 10/15/68 | 2212 | NASA 10.251 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 127 | SMITH,W.S. |
| 10/16/68 | 0011 | NASA 18.69 UA | UNITED STATES | WALLOPS ISLAND | D | | E | | | | | | | | 340 | JONES,L.M. |
| 10/16/68 | 0012 | NASA 10.252 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 123 | SMITH,W.S. |
| 10/16/68 | 0802 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 171 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 10/16/68 | 2315 | NASA 4.248 CS | UNITED STATES | WHITE SANDS | | | | A | | F | F | | | | 155 | ACTON,L.W. |
| 10/22/68 | 0803 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 168 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 10/22/68 | 1002 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 164 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 10/24/68 | 2050 | NASA 15.43 II | UNITED STATES | KIRUNA | B | | A<br>C | | | | | | | | 104 | STOFFREGEN,W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/26/68 | 0911 | NASA 12.13 GT | UNITED STATES | WHITE SANDS | | | | | | | X | | | | 245 | STUART, E. E. |
| 10/27/68 | 1003 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 168 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/29/68 | 1132 | TERRIER-SANDHA | UNITED STATES | JOHNSTON ISLAND | | | | | | | X | | | | 320 | UNKNOWN |
| 10/30/68 | 0806 | MP-12 | USSR | KHEISA ISLAND | | G | | | | | | | | | 171 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/31/68 | 2056 | ADF-3 -031 | CANADA | FORT CHURCHILL | | A | A C | | | | | | | | 140 | WILSON, B. G.<br>MCNAMARA, A. G.<br>WHALEN, B. A. |
| 11/01/68 | 0331 | ADF-3 -033 | CANADA | FORT CHURCHILL | | A | A C | D | | | | | | | 138 | WHALEN, B. A.<br>ANGER, C.<br>MCNAMARA, A. G. |
| 11/01/68 | 0440 | CE-EC | FRANCE | KIRUNA | | Z Y | | | | | | | | | 167 | BLAMONT, J. E.<br>GROVES, G. V.<br>JAESCHKE, R. |
| 11/01/68 | 0459 | SIDEWINDER-HV | NORWAY<br>UNITED STATES | ANDOYA | | | X | X | X | | | | | | N/A | LANDMARK, B.<br>MASEIDE, K.<br>ARSNES, K.<br>KANE, J. A. |
| 11/02/68 | 1617 | ARCAS | UNITED STATES | FORT CHURCHILL | | | X | X | | | | | | | N/A | MEGILL, L. R.<br>WHIPPLE, E. C. |
| 11/02/68 | 2150 | ARCAS | UNITED STATES | FORT CHURCHILL | | | X | X | | | | | | | N/A | MEGILL, L. R.<br>WHIPPLE, E. C. |
| 11/03/68 | 0142 | D-0028 | FRANCE | ANDOYA | X | | X | X | X | | | | | | 414 | BRUSTON, P.<br>CAMBOU, F. |
| 11/03/68 | 0319 | INCOSPAR 35.01 | INDIA | THUMBA | | | | | | | F | | | | 140 | RAO, U. R.<br>CHITNIS, E. V. |
| 11/06/68 | 1122 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 93 | UNKNOWN |
| 11/07/68 | 0305 | NASA 14.261 IG | UNITED STATES | THUMBA | | | | | | | F | | | | 150 | TERLS |
| 11/07/68 | 0305 | INCOSPAR 40.02 | INDIA | THUMBA | | | | | | | F | | | | 150 | RAO, U. R.<br>CHITNIS, E. V. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/07/68 | 0445 | TERRIER-SANDHA | UNITED STATES | JOHNSTON ISLAND | | | | | | | X | | | | 314 | UNKNOWN |
| 11/07/68 | 1827 | NASA 14.379 GI | UNITED STATES | WALLOPS ISLAND | | | C A E | | | | | | | | 104 | GOLDBERG,R.A. BAUER,S.J. |
| 11/08/68 | 1106 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | N/A | UNKNOWN |
| 11/08/68 | 1200 | SIOP | UNITED KINGDOM | SOUTH UIST | | B | C A | | | | | | | | N/A | WILLIAMS,E.R. |
| 11/09/68 | 0855 | AB 19.287 | UNITED STATES | FORT CHURCHILL | B | | B D | | | | | | | | 592 | VANCOUR,R.P. |
| 11/11/68 | 0900 | POISP | UNITED KINGDOM | SOUTH UIST | | | C E | B | B | | | | | | 142 | WILSON,J.W.G. ROTHWELL,P. |
| 11/12/68 | 1120 | SKUA II | | ARENOSELLO | | X | X | | | | | | | | 94 | UNKNOWN |
| 11/13/68 | 1146 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 90 | UNKNOWN |
| 11/15/68 | 0745 | NA 4.268 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 174 | MORTON,D.C. |
| 11/15/68 | 1158 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 90 | UNKNOWN |
| 11/16/68 | 1149 | SIIH | UNITED KINGDOM | SOUTH UIST | | B | C A | | | | | | | | N/A | WILLIAMS,E.R. |
| 11/18/68 | 1051 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 95 | UNKNOWN |
| 11/19/68 | 0139 | BLACK BRANT II | FED REP OF GERMANY | KIRUNA | | | X | X | | | | | | | 167 | HEINRICH, REIMER, |
| 11/19/68 | 0429 | ADF-3 -032 | CANADA | FORT CHURCHILL | | | C A | D | | | | | | | 288 | WHALEN,B.A. ANGER,C. MCNAMARA,A.G. |
| 11/19/68 | 0800 | AG 17.757 | UNITED STATES | FORT CHURCHILL | | | C | | | | | | | | 129 | ULWICK,J.C. SANDOCK,J.A. |
| 11/19/68 | 1800 | NASA 10.293 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 123 | SMITH,W.S. |
| 11/19/68 | 1830 | NASA 14.371 GI | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | | 200 | SOMYAJULU,Y.V. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/19/68 | 2025 | NASA 14.386 UM | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | | 148 | ALLEN,H.<br>HORVATH,J.J. |
| 11/20/68 | 1124 | NASA 10.283 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 120 | SMITH,W.S. |
| 11/20/68 | 1324 | NASA 10.284 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 114 | SMITH,W.S. |
| 11/21/68 | 1830 | AT 03.533 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 244 | HINTEREGGER,H.E.<br>ULWICK,J.C. |
| 11/21/68 | 1915 | NASA 4.240 US | UNITED STATES | WHITE SANDS | | | | | | | E | | | | 193 | BRUNER,E. |
| 11/21/68 | 2045 | NASA 4.215 NB | UNITED STATES | WALLOPS ISLAND | | | | | | | | C | | | 164 | PETWILLER,D.<br>LANGE,K.O. |
| 11/22/68 | 0031 | NASA 10.289 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH,W.S. |
| 11/22/68 | 0755 | NASA 10.290 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH,W.S. |
| 11/22/68 | 1043 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 95 | UNKNOWN |
| 11/22/68 | 1116 | SK-28 | UNITED KINGDOM | SARDINIA | | | | | | F | | | | | 210 | DE JAGER,C.<br>STEWARDSON,E.A. |
| 11/22/68 | 1256 | SOTH | UNITED KINGDOM | SOUTH UIST | | | C<br>E | | | F | | | | | N/A | WILLMORE,A.F.<br>GILMORE,D.J. |
| 11/25/68 | 0042 | SK-27 | UNITED KINGDOM | KIRUNA | B | | C<br>E | | | | | | | | 210 | RAWER,K.<br>MONFILS,A.<br>HULTQUIST,B. |
| 11/25/68 | 1101 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 91 | UNKNOWN |
| 11/27/68 | 0142 | NIKE-APACHE | NORWAY<br>FED REP OF GERMANY | ANDOYA | X | | X | X | X | | | | | | N/A | LANDMARK,B.<br>FOLKESTAD,K.<br>SKOVLI,G.<br>ARSNES,K.<br>ZAHRINGER,J. |
| 11/27/68 | 1502 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 95 | UNKNOWN |
| 11/29/68 | 1121 | SKUA II | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 91 | UNKNOWN |
| 11/30/68 | 1457 | POISH | UNITED KINGDOM | SOUTH UIST | | | C<br>A | | | E<br>F | | | | | N/A | HALL,J.E.<br>BRYANT,D.A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/03/68 | 1930 | BLACK BRANT IV | FED REP OF GERMANY | NATAL | | G | | | | | | | | | 700 | VON-ZAHN,U. |
| 12/03/68 | 2038 | SK-21 | UNITED KINGDOM | SARDINIA | | | | | | | D | | | | 198 | BUTLER,H.E. |
| 12/03/68 | 2159 | BLACK BRANT II | FED REP OF GERMANY | KIRUNA | | | X | X | | | | | | | 166 | HEINRICH, |
| 12/04/68 | 0754 | NIKE-APACHE | NORWAY<br>FED REP OF GERMANY | ANDOYA | X | | X | X | X | | | | | | 135 | LANDMARK,B.<br>ARMSTRONG,R.<br>FOLKESTAD,K.<br>SKOVLI,G.<br>TROIM,J.<br>ARSNES,K. |
| 12/04/68 | 1810 | NASA 14.351 UA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | 153 | HEMENWAY,C.L. |
| 12/04/68 | 1906 | BLACK BRANT II | FED REP OF GERMANY | FORT CHURCHILL | | X<br>G | | | | | | | | | 158 | GROSS, |
| 12/04/68 | 2227 | BLACK BRANT II | FED REP OF GERMANY | KIRUNA | | | X | X | | | | | | | 170 | REIMER,<br>SPENNER,K. |
| 12/05/68 | | | UNITED STATES | WHITE SANDS | | | | | | | F | | | | N/A | GORENSTEIN,P.<br>GURSKY,H.<br>KELLOGG,E.M.<br>GIACCONI,R. |
| 12/05/68 | 0035 | SL-ECI | UNITED KINGDOM<br>AUSTRALIA | WOOMERA | | | | | | C | | | | | 182 | BATES,B.<br>SHENTON,D.B. |
| 12/05/68 | 1136 | S07AH | UNITED KINGDOM | SOUTH UIST | | | C<br>E | | | F | | | | | 111 | WILLMORE,A.F.<br>GILMORE,D.J. |
| 12/05/68 | 1348 | S12H | UNITED KINGDOM | SOUTH UIST | | B | C<br>A | | | | | | | | 92 | WILLIAMS,E.R. |
| 12/05/68 | 1529 | P022H | UNITED KINGDOM | SOUTH UIST | | | C<br>A | | | E<br>F | | | | | 144 | HALL,J.E. |
| 12/06/68 | 0605 | | UNITED STATES | WHITE SANDS | | | | | | | F | | | | N/A | UNKNOWN |
| 12/07/68 | 0433 | SL-725 | UNITED KINGDOM<br>AUSTRALIA | WOOMERA | | X | X | | | X | | | | | 154 | BURROWS,K.<br>WILLMORE,P.A. |
| 12/07/68 | 0611 | NASA 4.264 CG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 149 | GURSKY,H.<br>GORENSTEIN,P. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/08/68 | 1204 | AE-CC7 | SWEDEN | KIRUNA | | | A<br>C | | | | | | | | 96 | BOYD,R.L.F.<br>PETERS,B. |
| 12/09/68 | 1317 | P00SH | UNITED KINGDOM | SOUTH UIST | | | C<br>A | | | E<br>F | | | | | 118 | WILLIAMS,E.R. |
| 12/09/68 | 2255 | AF 07.660 | UNITED STATES | EGLIN AFB | | V | A | | | | | | | | 124 | HIGGINS,J.<br>SISSENWINE,N. |
| 12/09/68 | 2255 | AF 07.664 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 118 | SISSENWINE,N. |
| 12/10/68 | 1716 | NASA 8.51 UA | UNITED STATES | FORT CHURCHILL | | | D | | | | | | | | 837 | DAMON,K.R. |
| 12/10/68 | 1832 | AG 07.883 | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 122 | NARCISI,R.S. |
| 12/12/68 | 0245 | AG 07.887 | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 118 | NARCISI,R.S. |
| 12/12/68 | 2108 | | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | N/A | UNKNOWN |
| 12/12/68 | 2308 | | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | N/A | UNKNOWN |
| 12/13/68 | 0311 | NASA 10.285 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 121 | SMITH,W.S. |
| 12/13/68 | 0459 | NASA 10.291 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH,W.S. |
| 12/13/68 | 0511 | NASA 10.286 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 124 | SMITH,W.S. |
| 12/13/68 | 0511 | NASA 10.286 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 126 | SMITH,W.S. |
| 12/13/68 | 0659 | | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | UNKNOWN |
| 12/13/68 | 0945 | AAF-2 -125 | CANADA | FORT CHURCHILL | | | C<br>E | | | | | A | | | 143 | LINDBLAD,B.A.<br>MCNAMARA,A.G.<br>TENNYSON,R.C. |
| 12/13/68 | 1515 | | UNITED KINGDOM | BARBADOS | | A | | | | | | | | | 76 | UNKNOWN |
| 12/13/68 | 1720 | | UNITED KINGDOM | BARBADOS | | A | | | | | | | | | 78 | UNKNOWN |
| 12/14/68 | 0527 | | UNITED KINGDOM | BARBADOS | | A | | | | | | | | | 76 | UNKNOWN |
| 12/14/68 | 0715 | | UNITED KINGDOM | BARBADOS | | A | | | | | | | | | 79 | UNKNOWN |
| 12/14/68 | 0919 | | UNITED KINGDOM | BARBADOS | | A | | | | | | | | | 81 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/14/68 | 1000 | | UNITED KINGDOM | BARBADOS | | A | | | | | | | | | 80 | UNKNOWN |
| 12/14/68 | 1127 | | UNITED KINGDOM | BARBADOS | | A | | | | | | | | | 79 | UNKNOWN |
| 12/14/68 | 1508 | NASA 14.352 UA | UNITED STATES | WHITE SANDS | | | | D | | | | | | | 159 | HEMENWAY, C.L. |
| 12/18/68 | 1138 | AKD-SB-021 | CANADA | FORT CHURCHILL | B | | C E | | | | | | | | 363 | MCEWEN, D.J. MCNAMARA, A.G. WHALEN, B.A. |
| 12/20/68 | 0300 | NASA 4.178 UG | UNITED STATES | WHITE SANDS | | | | | | | X | | | | 161 | HARWIT, M. |
| 01/02/69 | 0350 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 01/02/69 | 0942 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 01/02/69 | 1640 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 93 | HYDROMETEOROLOGICAL SERVICE |
| 01/02/69 | 1645 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOGICAL SERVICE |
| 01/02/69 | 2205 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 01/03/69 | 0000 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOGICAL SERVICE |
| 01/04/69 | 0200 | MT-135-38 T-070 | JAPAN | KAGOSHIMA | | A C J | | | | | | | | | 57 | ARIZUMI, N. SAKAI, I. KOBANE, S. |
| 01/04/69 | 0500 | MT-135-39 T-071 | JAPAN | KAGOSHIMA | | A C J | | | | | | | | | 59 | ARIZUMI, N. SAKAI, I. KOBANE, S. |
| 01/05/69 | 0200 | MT-135-40 T-072 | JAPAN | KAGOSHIMA | | A C J | | | | | | | | | 59 | ARIZUMI, N. SAKAI, I. KOBANE, S. |
| 01/05/69 | 0500 | MT-135-P-001 T-073 | JAPAN | KAGOSHIMA | | X | | | | | | | | | 44 | ARIZUMI, N. SAKAI, I. KOBANE, S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/06/69 | 2341 | AH 07.671 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 203 | ROSENBERG,N.W.<br>BEST,G.T.<br>MACLEOD,M.A. |
| 01/07/69 | 0035 | AG 07.626 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 154 | UNKNOWN |
| 01/07/69 | 0300 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 94 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/07/69 | 0352 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/07/69 | 0950 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/07/69 | 1000 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/07/69 | 1001 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 94 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/07/69 | 2147 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/07/69 | 2338 | AH 07.672 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 215 | ROSENBERG,N.W.<br>BEST,G.T.<br>MACLEOD,M.A. |
| 01/08/69 | 0210 | K-CSM-25<br>S-C69-001 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 344 | KIMURA,I.<br>OYA,H.<br>ASO,T. |
| 01/08/69 | 0210 | K-CSM-25<br>S-C69-003 | JAPAN | KAGOSHIMA | | | D | | | | | | | | 343 | TAKEMURA,S.<br>FUJITANI,K.<br>ASAHINA,T.<br>HISHIDA,Y.<br>KAJIYAMA,K. |
| 01/08/69 | 0210 | K-CSM-25<br>S-C69-004 | JAPAN | KAGOSHIMA | | | | | A | | | | | | 343 | AOYAMA,I.<br>TOYAMA,F. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/08/69 | 0210 | K -C9M-25<br>S -C69-002 | JAPAN | KAGOSHIMA | | | | B | | | | | | | 343 | IMAI,T.<br>IWASAKI,S.<br>IRIE,H.<br>YAMASHITA,T.<br>TAKEUCHI,H. |
| 01/08/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 94 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/09/69 | 0740 | K -C8 -15<br>S -C70-001 | JAPAN | KAGOSHIMA | | | B | | | | | | | | 188 | OYAMA,K.<br>FUGONO,N.<br>MIMURA,H.<br>ABIKO,K.<br>MATSUZAWA,T.<br>SATO,O. |
| 01/09/69 | 0740 | K -C8 -15<br>S -C70-002 | JAPAN | KAGOSHIMA | | | | | A | | | | | | 188 | AOYAMA,I.<br>TOYAMA,F. |
| 01/09/69 | 0740 | K -C8 -15<br>S -C70-003 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 188 | OBAYASHI,T.<br>EJIRI,M.<br>YAMAKI,T. |
| 01/10/69 | 0243 | NASA 4.206 UA | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 166 | FASTIE,W.G.<br>MOOS,H.W. |
| 01/11/69 | 0351 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/11/69 | 0730 | NASA 10.236 GM | UNITED STATES | POINT BARROW | | G | | | | | | | | | N/A | HILSENRATH,E. |
| 01/11/69 | 0945 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 94 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/11/69 | 1000 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/11/69 | 1556 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 93 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/11/69 | 1630 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/11/69 | 2145 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/11/69 | 2200 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 01/12/69 | 0132 | AG C7.652 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 157 | UNKNOWN |
| 01/12/69 | 0510 | K -1CC-01<br>T -C75 | JAPAN | KAGOSHIMA | | G | | | | D | | | | | 229 | TOHMATSU,T.<br>OGAWA,T. |
| 01/13/69 | 090C | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 01/13/69 | 2343 | AH C7.673 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 220 | UNKNOWN |
| 01/14/69 | 0525 | AAF-4 -017 | CANADA | FORT CHURCHILL | | C | | D | | | | | | | 99 | MCNAMARA,A.G.<br>MCEWEN,D.<br>FORSYTH,P.A.<br>BUDZINSKI,E.E. |
| 01/14/69 | 1000 | K -1C -04<br>S -C72-001 | JAPAN | KAGOSHIMA | | | D<br>C<br>E | | | | | | | | 229 | OYAMA,K.<br>FUGONO,N.<br>SUITSU,T.<br>MIMURA,H.<br>ABIKO,K.<br>MATSUZAWA,T.<br>SATO,O. |
| 01/14/69 | 1000 | K -1C -04<br>S -C72-0C2 | JAPAN | KAGOSHIMA | | | | | | F | | | | | 229 | MIYAMOTO,S.<br>HAYAKAWA,S.<br>TANAKA,Y. |
| 01/14/69 | 1000 | K -1C -04 | JAPAN | KAGOSHIMA | | E | | | | | | | | | 229 | MATSUMOTO,T. |
| 01/14/69 | 2014 | MP-12 | USSR | KHEISA ISLAND | | G | | D | | | | | | | 175 | UNKNOWN |
| 01/14/69 | 2014 | | USSR | KHEISA ISLAND | | | | | | | | | | | 176 | UNKNOWN |
| 01/15/69 | 0808 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 01/15/69 | 0928 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 01/16/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 91 | HYDROMETEOROLOGICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/17/69 | 0002 | BOOSTED ARCAS | SWEDEN | ANDOYA | X | | X | X | X | | | | | | 99 | STOFFREGEN;W. OERBLOM;H. |
| 01/17/69 | 0905 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/17/69 | 1834 | NASA 10.313 IM | UNITED STATES SWEDEN | KIRUNA | | Z | | | | | | | | | N/A | UDIN;I. SCOTT;A.F.D. |
| 01/17/69 | 2132 | NASA 10.306 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 112 | SMITH;W.S. |
| 01/18/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 92 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/18/69 | 1923 | BOOSTED ARCAS | SWEDEN | ANDOYA | X | | X | X | X | | | | | | 99 | STOFFREGEN;W. OERBLOM;H. |
| 01/19/69 | 0200 | NASA 10.299 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH;W.S. |
| 01/19/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/19/69 | 1200 | K -C9M-24 S -C74-0001 | JAPAN | KAGOSHIMA | C | | | | | C | | | | | 343 | TANABE;H. TAKECHI;A. ASHIDA;S. |
| 01/19/69 | 1200 | K -C9M-24 S -C74-0002 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 328 | OYA;H. ASOH;T. |
| 01/19/69 | 1200 | K -C9M-24 S -C74-0003 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 327 | KIMURA;I. MATSUMOTO;H. |
| 01/19/69 | 1200 | K -C9M-24 S -C74-0004 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 328 | TOHMATSU;T. OGAWA;T. |
| 01/19/69 | 1905 | NASA 10.314 IM | UNITED STATES SWEDEN | KIRUNA | | Z | | | | | | | | | N/A | UDIN;I. SCOTT;A.F.D. |
| 01/20/69 | 1900 | | UNITED STATES | FORT SHERMAN | | A | | | | | | | | | 81 | UNKNOWN |
| 01/21/69 | 0803 | MP-12 | USSR | KAPUSTIN YAR | | | C | | | | | | | | 170 | UNKNOWN |
| 01/21/69 | 1700 | | UNITED STATES | FORT SHERMAN | | A | | | | | | | | | 84 | UNKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 2 3 4 5 6 7 8 9 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|
| 01/22/69 | 0515 | | UNITED STATES | FORT SHERMAN | A | 77 | UNKNOWN |
| 01/22/69 | 0903 | MP-12 | USSR | KHEISA ISLAND | A | 93 | HYDROMETEOROLOGICAL SERVICE |
| 01/22/69 | 1110 | | UNITED STATES | FORT SHERMAN | A | 74 | UNKNOWN |
| 01/22/69 | 1730 | | UNITED STATES | FORT SHERMAN | A | 76 | UNKNOWN |
| 01/22/69 | 2300 | | UNITED STATES | FORT SHERMAN | A | 77 | UNKNOWN |
| 01/23/69 | 0350 | MP-12 | USSR | 25D 00'S 065D 00'E | A | 93 | HYDROMETEOROLOGICAL SERVICE |
| 01/23/69 | 0400 | MP-12 | USSR | 20D 00'S 065D 00'E | A | 93 | HYDROMETEOROLOGICAL SERVICE |
| 01/23/69 | 0503 | | UNITED STATES | FORT SHERMAN | A | 81 | UNKNOWN |
| 01/23/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | A | 88 | HYDROMETEOROLOGICAL SERVICE |
| 01/23/69 | 0948 | MP-12 | USSR | 25D 00'S 065D 00'E | A | 93 | HYDROMETEOROLOGICAL SERVICE |
| 01/23/69 | 1000 | MP-12 | USSR | 20D 00'S 065D 00'E | A | 89 | HYDROMETEOROLOGICAL SERVICE |
| 01/23/69 | 1202 | MP-12 | USSR | KAPUSTIN YAR | C | 174 | UNKNOWN |
| 01/23/69 | 1620 | MP-12 | USSR | 20D 00'S 065D 00'E | A | 92 | HYDROMETEOROLOGICAL SERVICE |
| 01/23/69 | 1700 | | UNITED STATES | FORT SHERMAN | A | 83 | UNKNOWN |
| 01/23/69 | 2000 | SL-726 | UNITED KINGDOM AUSTRALIA | WOOMERA | C C | 149 | BURROWS,K. WILSON,J. DORLING,E. |
| 01/23/69 | 2149 | MP-12 | USSR | 25D 00'S 065D 00'E | A | 94 | HYDROMETEOROLOGICAL SERVICE |
| 01/23/69 | 2300 | NASA 10.315 IM | UNITED STATES SWEDEN | KIRUNA | Z | 116 | UDIN,I. SCOTT,A.F.D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE(KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/24/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 94 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/24/69 | 1558 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 87 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/24/69 | 1701 | | UNITED STATES | FORT SHERMAN | | A | | | | | | | | | 80 | UNKNOWN |
| 01/25/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 96 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/25/69 | 2100 | NASA 10.316 IM | UNITED STATES SWEDEN | KIRUNA | | Z | | | | | | | | | 118 | ODIN,I. SCOTT,A.F.D. |
| 01/26/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 92 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/26/69 | 0945 | NASA 17.03 GE | UNITED STATES | WALLOPS ISLAND | B | | | | | | | | | | 271 | HESS,W. |
| 01/27/69 | 0353 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/27/69 | 0400 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/27/69 | 0943 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 96 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/27/69 | 0945 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/27/69 | 1545 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/27/69 | 1600 | | UNITED STATES | FORT SHERMAN | | A | | | | | | | | | 83 | UNKNOWN |
| 01/27/69 | 1640 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/27/69 | 1953 | NASA 15.47 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 102 | PEDOLSKY,H. |
| 01/27/69 | 2145 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 88 | HYDROMETEOROLOG-ICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/27/69 | 2200 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 01/28/69 | 0549 | NASA 18.25 UG | UNITED STATES | WALLOPS ISLAND | | | | | | F | | | | | 224 | KRAUSHAAR, W.L. |
| 01/28/69 | 0716 | AEF-2 -118 | CANADA | FORT CHURCHILL | | C F | | | | | | | | | 149 | MCNAMARA, A.G. FORSYTH, P SCHIFF, H. |
| 01/28/69 | 0907 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 94 | HYDROMETEOROLOGICAL SERVICE |
| 01/28/69 | 1852 | MP-12 | USSR | 28D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 01/29/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 87 | HYDROMETEOROLOGICAL SERVICE |
| 01/29/69 | 1002 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 01/30/69 | 0902 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 01/30/69 | 1003 | MP-12 | USSR | 34D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 01/30/69 | 2004 | MP-12 | USSR | 36D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOGICAL SERVICE |
| 01/30/69 | 2017 | NASA 10.303 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 124 | SMITH, W.S. |
| 01/31/69 | 0315 | NASA 4.266 DG | UNITED STATES | WHITE SANDS | | | | | | | D E | | | | 179 | CARRUTHERS, G.R. |
| 01/31/69 | 0700 | NASA 10.298 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W.S. |
| 01/31/69 | 0838 | NASA 10.274 GM | UNITED STATES | POINT BARROW | | G | | | | | | | | | N/A | HILSENRATH, E. |
| 01/31/69 | 0904 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 87 | HYDROMETEOROLOGICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/31/69 | 1700 | NASA 14.391 UI | UNITED STATES | WALLOPS ISLAND | | | A<br>B<br>C | | | | | | | | 227 | BOWHILL,S.A.<br>SECHRIST,C.F.<br>MECHTLY,E.A.<br>SMITH,L.G. |
| 01/31/69 | 1730 | AH 07.891 | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 137 | ULWICK,J.C. |
| 01/31/69 | 1757 | NASA 10.307 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 121 | SMITH,W.S. |
| 01/31/69 | 1821 | NASA 15.61 DM | UNITED STATES | WALLOPS ISLAND | | | | | | D | | | | | 54 | SMITH,W.S. |
| 01/31/69 | 1900 | MP-12 | USSR | 40D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 01/31/69 | 1910 | NASA 14.389 UA | UNITED STATES | WALLOPS ISLAND | | F | | | | | | | | | 115 | BARTH,C.A.<br>MEIRA,L.G. |
| 01/31/69 | 2112 | NASA 14.396 GM | UNITED STATES | WALLOPS ISLAND | | | | | | D | | | | | 116 | HEATH,D.F. |
| 01/31/69 | 2125 | NASA 10.268 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 20 | KRUEGER,A.J. |
| 02/01/69 | 1900 | MP-12 | USSR | 43D 00'S 065D 00'E | | A | | | | | | | | | 87 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/02/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 87 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/02/69 | 1805 | MP-12 | USSR | 15D 14'S 065D 05'E | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/02/69 | 1900 | MP-12 | USSR | 46D 00'S 065D 00'E | | A | | | | | | | | | 84 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/03/69 | 1806 | MP-12 | USSR | 11D 45'S 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/03/69 | 2000 | MP-12 | USSR | 50D 00'S 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/04/69 | 1435 | NASA 4.272 UA | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 186 | NIER,A.O.C. |
| 02/04/69 | 1800 | MP-12 | USSR | 08D 03'S 065D 00'E | | A | | | | | | | | | 96 | HYDROMETEOROLOG-ICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/04/69 | 2000 | MP-12 | USSR | 54D 00'S 065D 00'E | | A | | | | | | | | | 98 | HYDROMETEOROLOGICAL SERVICE |
| 02/04/69 | 2230 | NASA 10.300 GM | UNITED STATES | FCINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 02/05/69 | 0802 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 85 | HYDROMETEOROLOGICAL SERVICE |
| 02/05/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 02/05/69 | 1800 | MP-12 | USSR | 04D 11'S 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 02/05/69 | 2000 | MP-12 | USSR | 57D 00'S 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 02/06/69 | | NASA 14.392 UI | UNITED STATES | WALLOPS ISLAND | | | X | | | | | | | | N/A | SCHMERLING, E. R. |
| 02/06/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 87 | HYDROMETEOROLOGICAL SERVICE |
| 02/06/69 | 0939 | NASA 10.304 GM | UNITED STATES | FORT CHURCHILL | | Z | | | | | | | | | 129 | SMITH, W. S. |
| 02/06/69 | 1435 | NASA 4.273 LA | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 138 | NIER, A. O. C. |
| 02/06/69 | 1709 | NASA 14.392 UI | UNITED STATES | WALLOPS ISLAND | | | C E A | | | | | | | | 219 | SMITH, L. G.<br>BOWHILL, S. A.<br>SECHRIST, C. F.<br>MECHTLY, E. A. |
| 02/06/69 | 1745 | MP-12 | USSR | 59D 54'S 064D 43'E | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 02/06/69 | 1800 | NASA 15.62 DM | UNITED STATES | WALLOPS ISLAND | | | | | | D | | | | | 56 | KRUEGER, A. J. |
| 02/06/69 | 1825 | MP-12 | USSR | 00D 30'S 065D 09'E | | A | | | | | | | | | 94 | HYDROMETEOROLOGICAL SERVICE |
| 02/06/69 | 1929 | NASA 14.390 UA | UNITED STATES | WALLOPS ISLAND | | E | | | | | | | | | 117 | BARTH, C. A.<br>MEIRA, L. G. |
| 02/06/69 | 2000 | MP-12 | USSR | 60D 00'S 065D 00'E | | A | | | | | | | | | 95 | HYDROMETEOROLOGICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/06/69 | 2109 | NASA 10.267 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 128 | SMITH,W.S. |
| 02/07/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 89 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/07/69 | 1720 | MP-12 | USSR | 03D 05'N 064D 52'E | | A | | | | | | | | | 86 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/08/69 | 0319 | NASA 4.308 UA | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 163 | FASTIE,WG., MOOS,W. |
| 02/08/69 | 0440 | NASA 14.269 UI | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 133 | HEIKKLA,W.J.A. |
| 02/09/69 | 2200 | MP-12 | USSR | 11D 07'N 065D 11'E | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/10/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 89 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/10/69 | 2200 | MP-12 | USSR | 14D 53'S 065D 03'E | | A | | | | | | | | | 93 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/11/69 | 2110 | P023K | UNITED KINGDOM SWEDEN | KIRUNA | | | C E | C | | | | | | | 157 | BRYANT,D.A. |
| 02/11/69 | 2200 | MP-12 | USSR | 18D 39'N 065D 00'E | | A | | | | | | | | | 93 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/12/69 | 0316 | NASA 14.306 UI | UNITED STATES | FORT CHURCHILL | B | | C | | | | | | | | 137 | HEIKKLA,W.J.A. |
| 02/12/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/12/69 | 1303 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 81 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/12/69 | 1715 | NASA 4.135 DG | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 188 | TOUSEY,R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/13/69 | 0205 | K -C9M-23<br>S -C7S | JAPAN | KAGOSHIMA | | | | B | | | | | | | 310 | HIGASHINO, I.<br>SASANUMA, M.<br>MASUOKA, T.<br>WATANABE, N.<br>SUZUKI, N.<br>KUBOI, T.<br>KANETO, T.<br>MATSUSHIMA, K. |
| 02/13/69 | 2311 | AMF-2 -046 | UNITED STATES | WALLOPS ISLAND | | A<br>J | | | | | | | | | 265 | BEDINGER, J.F. |
| 02/14/69 | 0100 | NASA 14.397 CM | UNITED STATES | WALLOPS ISLAND | | V<br>Y | | | | | | | | | 174 | SMITH, W.S.<br>BEDINGER, J.F.<br>ALLEN, A. |
| 02/14/69 | 0319 | NASA 14.399 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 212 | SMITH, W.S.<br>BEDINGER, J.F. |
| 02/14/69 | 0500 | NASA 14.400 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 210 | SMITH, W.S.<br>BEDINGER, J.F. |
| 02/14/69 | 0700 | NASA 14.401 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 209 | SMITH, W.S.<br>BEDINGER, J.F. |
| 02/14/69 | 0900 | NASA 14.398 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 206 | SMITH, W.S.<br>BEDINGER, J.F. |
| 02/14/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 02/14/69 | 1113 | NASA 14.402 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 213 | SMITH, W.S.<br>BEDINGER, J.F. |
| 02/14/69 | 2215 | PC27K | UNITED KINGDOM<br>SWEDEN | KIRUNA | | | C<br>E | | | | | | | | 149 | BULLOUGH, K. |
| 02/17/69 | | NASA 14.374 UI | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | N/A | SCHMERLING, E.R. |
| 02/17/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 85 | HYDROMETEORCLOGICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/19/69 | 0417 | AMF-2 -117 | CANADA | FORT CHURCHILL | B | | C | | | | | | | | 124 | MCEWEN,D.<br>MCNAMARA,A.G.<br>SCHIFF,H.<br>NICHOLLS,R.W. |
| 02/19/69 | 0928 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/19/69 | 1348 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 84 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/20/69 | 1148 | VERONIQUE | FRANCE | KHEISA ISLAND | | | C<br>D | | | | | | | | 107 | GIRAUD,M. |
| 02/22/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 94 | HYDROMETEOROLOG-ICAL SERVICE |
| 02/25/69 | 1421 | SWINDER-HV ARC | DENMARK<br>NETHERLANDS<br>UNITED KINGDOM<br>INTERNATIONAL | ANDOYA | | | X | X | X | | | | | | 86 | PETERS,B.<br>DE JAGER,C.<br>RIELDER,W.W. |
| 02/25/69 | 1633 | CENTAURE II B | FRANCE<br>FED REP OF GERMANY<br>NETHERLANDS<br>INTERNATIONAL | ANDOYA | | | X | X | X | | | | | | 136 | RIEDLER,W.W.<br>LABEYRIE,J. |
| 02/25/69 | 2137 | SIDEWINDER-HV | FRANCE<br>FED REP OF GERMANY<br>NETHERLANDS<br>INTERNATIONAL | ANDOYA | | | X | X | X | | | | | | 68 | PETERS,B.<br>DE JAGER,C.<br>RIELDER,W.W. |
| 02/27/69 | 0200 | NASA 14.321 | UNITED STATES | FORT CHURCHILL | X | | | | A | | | | | | N/A | UNKNOWN |
| 02/28/69 | 1857 | NASA 12.04 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 215 | RUDMANN,A.A. |
| 03/01/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 03/03/69 | 1000 | NASA 4.199 GE | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 163 | HOLT,S.<br>BOLT,E.<br>OLT,S.S.<br>BOLT,E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/05/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEORCLOG-ICAL SERVICE |
| 03/06/69 | 0614 | AAD-4 -016 | CANADA | FORT CHURCHILL | | | A | C D | | | | | | | N/A | BARRINGTON,R.E. BUDZINSKI,E.E. WHALEN,B.A. |
| 03/07/69 | 0227 | NASA 4.286 UG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 160 | NOVICK,R. |
| 03/07/69 | 1312 | NASA 18.83 GE | UNITED STATES | CAPE PARRY | | | | | B | | | | | | N/A | WESCOTT,E. |
| 03/07/69 | 2240 | AT 03.727 | UNITED STATES | NATAL | | | | | | C | | | | | 193 | WALKER,R.G. |
| 03/08/69 | 0318 | NASA 18.84 GE | UNITED STATES | CAPE PARRY | | | | | B | | | | | | N/A | WESCOTT,E. |
| 03/08/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 88 | HYDROMETEORCLOG-ICAL SERVICE |
| 03/08/69 | 1535 | MP-12 | USSR | KHEISA ISLAND | | A C | | | | | | | | | 173 | INST OF EXPERI-MENTAL METEOROLOGY |
| 03/09/69 | 0329 | NASA 18.85 GE | UNITED STATES | CAPE PARRY | | | | | B | | | | | | N/A | WESCOTT,E. |
| 03/09/69 | 1634 | MP-12 | USSR | KHEISA ISLAND | | A C | | | | | | | | | 172 | INST OF EXPERI-MENTAL METEOROLOGY |
| 03/10/69 | 0440 | AKD-58-020 | CANADA | FORT CHURCHILL | B | | E | | | F | | | | | N/A | MCNAMARA,A.G. WHALEN,B. FORSYTH,P.A. MCEWEN,D. OUTIER,G. ANGER,C.D. |
| 03/10/69 | 1610 | MP-12 | USSR | KHEISA ISLAND | | A C | | | | | | | | | 168 | INST OF EXPERI-MENTAL METEOROLOGY |
| 03/10/69 | 2300 | MP-12 | USSR | KHEISA ISLAND | | A C | | | | | | | | | 175 | INST OF EXPERI-MENTAL METEOROLOGY |
| 03/11/69 | 0333 | AAF-58-022 | CANADA | FORT CHURCHILL | B | | E | | | F | | | | | N/A | MCNAMARA,A.G. ANGER,C.D. FORSYTH,P.A. KAVADAS,A. MCEWEN,D.J. WLOCHOWICZ,R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/11/69 | 0632 | NASA 18.81 LA | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | N/A | BARTH,C.A.<br>HARP,W. |
| 03/12/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 03/13/69 | 1645 | MP-12 | USSR | KHEISA ISLAND | | A<br>C | | | | | | | | | 174 | INST OF EXPERI-MENTAL METEOROLOGY |
| 03/13/69 | 1817 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 88 | HYDROMETEOROLOG-ICAL SERVICE |
| 03/13/69 | 2133 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 93 | HYDROMETEOROLOG-ICAL SERVICE |
| 03/13/69 | 2223 | MP-12 | USSR | KHEISA ISLAND | | A<br>C | | | | | | | | | 170 | INST OF EXPERI-MENTAL METEOROLOGY |
| 03/14/69 | 0530 | NASA 4.290 DG<br>NB 3.210 | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 154 | FRITZ,G.<br>HENRY,R.C.<br>MEEKINS,J.F. |
| 03/14/69 | 0701 | NASA 4.251 GG<br>-UG | UNITED STATES | WHITE SANDS | | | | | | | C | | | | 177 | BOGGESS,A.<br>BLESS,R.C.<br>DAVIS,R. |
| 03/14/69 | 2130 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 93 | HYDROMETEOROLOG-ICAL SERVICE |
| 03/14/69 | 2220 | MP-12 | USSR | KHEISA ISLAND | | A<br>C | | D | | | | | | | 161 | INST OF EXPERI-MENTAL METEOROLOGY |
| 03/15/69 | 1755 | K-NA-11 | FED REP OF GERMANY | KIRUNA | | | X | | | | | | | | 226 | HAERENDEL,G. |
| 03/15/69 | 2045 | ESROS43/002 | FED REP OF GERMANY<br>BELGIUM<br>SWEDEN<br>UNITED KINGDOM | KIRUNA | B | | C<br>E | D | | | | | | | 211 | RAWER,K.<br>MONFILS,A.<br>HULTQVIST,B.<br>SAYERS,J. |
| 03/15/69 | 2120 | P02EK | UNITED KINGDOM | KIRUNA | | | C<br>E | | | | | | | | 153 | BULLOUGH,K. |
| 03/15/69 | 2231 | ESROC52/001 | BELGIUM | KIRUNA | B | | | | | | | | | | 136 | MONFILS,A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/16/69 | 1805 | NIKE-APACHE | FED REP OF GERMANY | KIRUNA | | X | X | | | | | | | | 233 | HABLICK, KAPPLER, GIESE, |
| 03/17/69 | 0004 | P029K | UNITED KINGDOM SWEDEN | KIRUNA | | | E C | | | | | | | C | 151 | ROTHWELL, P. |
| 03/17/69 | 1209 | D-0C1 | FRANCE | KOUROU | | | | | | E | | | | | 410 | DELABOUDINIERE, M. |
| 03/17/69 | 1238 | NASA 18.15 UE | UNITED STATES | FORT WAINWRIGHT | B | | B | D | | | | | | | 216 | DAVIS, T.N. JOHNSTONE, A.D. |
| 03/17/69 | 1810 | K-NA-18 | FED REP OF GERMANY | KIRUNA | | | X | | | | | | | | 231 | HAERENDEL, G. |
| 03/17/69 | 1835 | MP-12 | USSR | KHEISA ISLAND | | A C | | D | | | | | | | 169 | INST OF EXPERIMENTAL METEOROLOGY |
| 03/18/69 | 1816 | P011K | UNITED KINGDOM SWEDEN | KIRUNA | | V | | | | | | | | | 170 | ROTHWELL, P. MORTELLI, E. |
| 03/19/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 97 | HYDROMETEOROLOGICAL SERVICE |
| 03/19/69 | 2130 | MP-12 | USSR | KHEISA ISLAND | | | D | D | | | | | | | 181 | INST OF EXPERIMENTAL METEOROLOGY |
| 03/20/69 | 1750 | MP-12 | USSR | KHEISA ISLAND | | A C | | | | | | | | | 169 | INST OF EXPERIMENTAL METEOROLOGY |
| 03/20/69 | 1930 | MP-12 | USSR | KHEISA ISLAND | | B G | | D | | | | | | | 171 | INST OF EXPERIMENTAL METEOROLOGY |
| 03/20/69 | 2030 | MP-12 | USSR | KHEISA ISLAND | | A B C | | D | | | | | | | 169 | INST OF EXPERIMENTAL METEOROLOGY |
| 03/21/69 | 0453 | AT 03.756 | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 152 | ULWICK, J.C. |
| 03/21/69 | 2006 | MP-12 | USSR | KHEISA ISLAND | | | D | | | | | | | | 175 | INST OF EXPERIMENTAL METEOROLOGY |
| 03/22/69 | 0250 | MP-12 | USSR | KHEISA ISLAND | | G | D | D | | | | | | | 184 | INST OF EXPERIMENTAL METEOROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/24/69 | 1001 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 03/26/69 | 1202 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 03/26/69 | 1402 | MP-12 | USSR | KHEISA ISLAND | | G | D | D | | | | | | | 178 | INST OF EXPERIMENTAL METEOROLOGY |
| 03/27/69 | 1335 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 03/27/69 | 1530 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 03/28/69 | 0025 | NASA 10.309 GM | UNITED STATES | ARENOSELLO | | Z | | | | | | | | | 121 | AZCARRAGA,A. |
| 03/28/69 | 0701 | NB 3.205 | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 161 | CHUBB,T.A.<br>BYRAM,E.T. |
| 03/28/69 | 0732 | NASA 10.296 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 121 | SMITH,W.S. |
| 03/29/69 | 0005 | NASA 10.310 GM | UNITED STATES | ARENOSELLO | | Z | | | | | | | | | 122 | AZCARRAGA,A. |
| 03/29/69 | 0400 | ADF-3 -037 | CANADA | FORT CHURCHILL | B | | | | | | | | | | 108 | JONES,A.V.<br>LLEWELLYN,E.J. |
| 03/29/69 | 0715 | NASA 10.308 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 111 | SMITH,W.S. |
| 03/29/69 | 1158 | ADF-3 -038 | CANADA | FORT CHURCHILL | B | | | | | | | | | | 114 | JONES,A.V.<br>LLEWELLYN,E.J. |
| 03/29/69 | 1300 | MP-12 | USSR | KAPUSTIN YAR | | B<br>G | D | | | | | | | | 175 | INST OF EXPERIMENTAL METEOROLOGY |
| 03/29/69 | 2000 | P026K | UNITED KINGDOM<br>SWEDEN | KIRUNA | | | C<br>E | | | | | | | | 150 | BULLOUGH,K. |
| 03/30/69 | 0333 | AT 03.759 | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 150 | ULWICK,J.C. |
| 03/31/69 | 1418 | REHNUMA-01 | PAKISTAN | SONMIANI | | B | | | | | | | | | 138 | SHAFI-AHMED,M.<br>HANIF,M. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/01/69 | 0438 | ADD-58-023 | CANADA | FORT CHURCHILL | B | | | | | | | | | | 372 | ANGER,C.D.<br>MCNAMARA,A.G.<br>JUDGE,R.J.R.<br>JONES,A.V.<br>WIOCHOWICZ,P. MCEW |
| 04/01/69 | 0954 | SL-724 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | | | | F | | | | | 192 | COOKE,B.A. |
| 04/01/69 | 1930 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 04/02/69 | 0832 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 92 | HYDROMETEOROLOG-ICAL SERVICE |
| 04/03/69 | 0035 | SL-502 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | C<br>E | | | F | | | | | 273 | BOYD,R.L.F.<br>WILLMORE,A.P.<br>TIMOTHY,G.<br>WAGER,J. |
| 04/04/69 | 1935 | AG 03.527 | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 248 | HINTEREGGER,H.E. |
| 04/04/69 | 1950 | AT 03.534 | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 220 | HINTEREGGER,H.E. |
| 04/08/69 | 1700 | NASA 4.282 CS | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 176 | REIDY,W.P.<br>VAIANA,G. |
| 04/09/69 | 0933 | MP-12 | USSR | KAPUSTIN YAR | | B<br>C<br>F | | | | | | | | | 170 | UNKNOWN |
| 04/09/69 | 1003 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 89 | HYDROMETEOROLOG-ICAL SERVICE |
| 04/09/69 | 2038 | NIKE-APACHE | NORWAY<br>FED REP OF GERMANY | ANDOYA | X | | | X | X | X | | | | | 139 | LANDMARK,B.<br>FOLKESTAD,K.<br>SKOVLI,G.<br>ARSNES,K.<br>ZAHRINGER,J. |
| 04/12/69 | 1900 | ADF-3 -029 | CANADA<br>UNITED STATES | FORT CHURCHILL | | | A<br>C | | | | | | | | 26 | MCNAMARA,A.G.<br>WHALEN,B.A.<br>VOGAN,E.L. |
| 04/12/69 | 2319 | NASA 14.325 GE | UNITED STATES | FORT CHURCHILL | | | | A | | | | | | | 158 | BERTSCH,D.L. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/13/69 | 0033 | DRAGON II B | FRANCE | ANDOYA | X | | X | X | X | | | | | | 399 | BRUSTON,P.<br>CAMBOU,F. |
| 04/13/69 | 0843 | SWINDER-HV ARC | DENMARK<br>NETHERLANDS<br>UNITED KINGDOM<br>INTERNATIONAL | ANDOYA | | | X | X | X | | | | | | 51 | WESTERLUND,L.H.<br>PETERS,B.<br>DE JAGER,C.<br>WILLMORE,A.P. |
| 04/13/69 | 1040 | SWINDER-HV ARC | DENMARK<br>NETHERLANDS<br>UNITED KINGDOM<br>INTERNATIONAL | ANDOYA | | | X | X | X | | | | | | 66 | WESTERLUND,L.H.<br>PETERS,B.<br>DE JAGER,C.<br>WILLMORE,A.P. |
| 04/13/69 | 1404 | NASA 14.326 GE | UNITED STATES | FORT CHURCHILL | | | | A | | X | | | | | 155 | BERTSCH,D.L. |
| 04/14/69 | 1536 | NASA 4.233 GS | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 187 | NEUPERT,W.M. |
| 04/14/69 | 1711 | SWINDER-HV ARC | DENMARK<br>NETHERLANDS<br>UNITED KINGDOM<br>INTERNATIONAL | ANDOYA | | | X | X | X | | | | | | 58 | WESTERLUND,L.H.<br>PETERS,B.<br>DE JAGER,C.<br>WILLMORE,A.P. |
| 04/14/69 | 1815 | ESROC39/001 | FED REP OF GERMANY<br>SWEDEN | KIRUNA | | | C<br>D | D | | | | | | | 5 | RAWER,K.<br>HULTQVIST,B.<br>ZAHRINGER,J. |
| 04/14/69 | 2000 | SWINDER-HV ARC | DENMARK<br>NETHERLANDS<br>UNITED KINGDOM<br>INTERNATIONAL | ANDOYA | | | X | X | X | | | | | | 56 | WESTERLUND,L.H.<br>PETERS,B.<br>DE JAGER,C.<br>WILLMORE,A.P. |
| 04/14/69 | 2315 | NASA 14.327 GE | UNITED STATES | FORT CHURCHILL | | | | A | | X | | | | | 161 | BERTSCH,D.L. |
| 04/15/69 | 1103 | ESROC39/002 | FED REP OF GERMANY<br>SWEDEN | KIRUNA | | | C<br>D | D | | | | | | | 134 | RAWER,K.<br>HULTQVIST,B.<br>ZAHRINGER,J. |
| 04/15/69 | 1849 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 94 | HYDROMETEORCLOG-ICAL SERVICE |
| 04/16/69 | 0800 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEORCLOG-ICAL SERVICE |
| 04/16/69 | 1003 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/16/69 | 1520 | NASA 4.247 DS | UNITED STATES | WHITE SANDS | | | | | | | E C | | | | 188 | TOUSEY,R. KOOMEN,M. |
| 04/17/69 | 0505 | SL-EC6 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | | | | D | | | | | 202 | WILSON,R. BURTON,W.M. STEWART,K.H. KERLEY,M.J. |
| 04/17/69 | 0657 | NASA 18.80 CE | UNITED STATES | FORT CHURCHILL | B | | B | D | | | | | | | 260 | BERNSTEIN,W. |
| 04/17/69 | 1645 | NE 3.223 NASA 4.274 D | UNITED STATES | WHITE SANDS | | | B | D | | | | | | | 181 | KOOMEN,M.J. TOUSEY,R. |
| 04/17/69 | 1645 | NASA 4.274 DS | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 182 | TOUSEY,R. KOOMEN,M. |
| 04/17/69 | 2100 | NASA 14.393 UI | UNITED STATES | WALLOPS ISLAND | C | | C E | | | | | | | | 210 | BOWHILL,S.A. MECHTLY,G.A. SECHRIST,C.F. SMITH,L.G. |
| 04/17/69 | 2148 | D-0028 | NORWAY | ANDOYA | X | | X | X | X | | | | | | 329 | HAZER BRUSTON,P. |
| 04/18/69 | 0441 | AT 06.288 | UNITED STATES | FORT CHURCHILL | | | B | C | | | | | | | 300 | MCCLAY,J.F. |
| 04/18/69 | 0443 | AH 07.297 | UNITED STATES | FORT CHURCHILL | | | B | C | | | | | | | 160 | VANCOUR,R.P. |
| 04/18/69 | 1300 | MP-12 | USSR | KAPUSTIN YAR | | | D | | | | | | | | 174 | INST OF EXPERIMENTAL METEOROLOGY |
| 04/18/69 | 1330 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 87 | HYDROMETEORCLOGICAL SERVICE |
| 04/18/69 | 1520 | MP-12 | USSR | KAPUSTIN YAR | | | | | | E | | | | | 178 | INST OF EXPERIMENTAL METEOROLOGY |
| 04/18/69 | 1550 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 88 | HYDROMETEORCLOGICAL SERVICE |
| 04/19/69 | 0010 | AMM-BA-001 | CANADA | FORT CHURCHILL | C | | | | | | | | | | 104 | SCHIFF,H.I. MEGILL,L.R. |
| 04/19/69 | 0117 | AMM-BA-002 | CANADA | FORT CHURCHILL | C | | | | | | | | | | 103 | SCHIFF,H.I. MEGILL,L.R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/19/69 | 0409 | AMM-BA-003 | CANADA | FORT CHURCHILL | C | | | | | | | | | | 55 | SCHIFF,H.I. MEGILL,L.R. |
| 04/19/69 | 1332 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 04/19/69 | 1522 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 81 | HYDROMETEOROLOG-ICAL SERVICE |
| 04/19/69 | 1632 | MP-12 | USSR | KAPUSTIN YAR | | | | | | E | | | | | 174 | INST OF EXPERI-MENTAL METEOROLOGY |
| 04/20/69 | 1304 | MP-12 | USSR | KAPUSTIN YAR | | | D | | | | | | | | 175 | INST OF EXPERI-MENTAL METEOROLOGY |
| 04/20/69 | 1524 | MP-12 | USSR | KAPUSTIN YAR | | | | | | E | | | | | 171 | INST OF EXPERI-MENTAL METEOROLOGY |
| 04/20/69 | 1554 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 04/21/69 | 1306 | MP-12 | USSR | KAPUSTIN YAR | | G | | D | | | | | | | 173 | INST OF EXPERI-MENTAL METEOROLOGY |
| 04/21/69 | 1346 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 89 | HYDROMETEOROLOG-ICAL SERVICE |
| 04/21/69 | 1526 | MP-12 | USSR | KAPUSTIN YAR | | | | | | E | | | | | 176 | INST OF EXPERI-MENTAL METEOROLOGY |
| 04/21/69 | 1556 | | USSR | KAPUSTIN YAR | | A | | | | | | | | | 87 | HYDROMETEOROLOG-ICAL SERVICE |
| 04/22/69 | 0331 | SL-6C4 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | | | | D | | | | | 181 | WILSON,R. JONES,B. ENGSTROM,F. |
| 04/23/69 | 0300 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 97 | HYDROMETEOROLOG-ICAL SERVICE |
| 04/23/69 | 1210 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 88 | HYDROMETEOROLOG-ICAL SERVICE |
| 04/23/69 | 1310 | MP-12 | USSR | KAPUSTIN YAR | | F | | | | | | | | | 169 | CENTRAL AEROLOG-ICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/23/69 | 1530 | MP-12 | USSR | KAPUSTIN YAR | | | | | | E | | | | | 176 | INST OF EXPERIMENTAL METEOROLOGY |
| 04/23/69 | 1600 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 04/24/69 | 0045 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 04/26/69 | 1730 | INCOSPAR 40.C4 | INDIA | THUMBA | | | | | | | F | | | | 144 | CHITNIS,E.V.<br>RAO,U.R.<br>ODA,M. |
| 04/27/69 | 0322 | NASA 4.278 UG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 158 | BRADT,H.V. |
| 04/28/69 | 1734 | INCOSPAR 40.C5 | INDIA | THUMBA | | | | | | | F | | | | 148 | CHITNIS,E.V.<br>RAO,U.R.<br>ODA,M. |
| 04/30/69 | 0404 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 04/30/69 | 0800 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 05/01/69 | 2000 | AHF-4 -014 | CANADA | FORT CHURCHILL | | | C<br>D<br>E | | | | | | | | 760 | BARRINGTON,R.E.<br>MCNAMARA,A.G.<br>LYON,G.F. |
| 05/01/69 | 2026 | NASA 12.15 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 215 | RUDMANN,A.A. |
| 05/07/69 | 0303 | MP-12 | USSR | VOLGOGRAD | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 05/07/69 | 1400 | AHF-4 -015 | CANADA | FORT CHURCHILL | | | D<br>E | | | | | | | | 820 | MCNAMARA,A.G.<br>SHERPHERD,G.G.<br>LYON,G.F. |
| 05/08/69 | 0311 | NASA 10.322 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 129 | SMITH,W.S. |
| 05/10/69 | 0436 | NASA 10.321 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 128 | SMITH,W.S. |
| 05/12/69 | | NASA 14.362 UM | UNITED STATES | WALLOPS ISLAND | | B<br>C<br>F | | | | | | | | | 120 | HORVATH,J.J. |

| DATE (UT.) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/13/69 | 0104 | AH C7.678 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 190 | MACLEOD, M. A. |
| 05/13/69 | 0123 | AH C7.674 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 191 | ROSENBERG, N. W. |
| 05/14/69 | 0800 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 05/14/69 | 1510 | AH C7.686 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 175 | UNKNOWN |
| 05/15/69 | 0104 | AH C7.675 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 204 | ROSENBERG, N. W. |
| 05/15/69 | 0106 | AH C7.679 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 203 | MACLEOD, M. A. |
| 05/15/69 | 2310 | NASA 4.216 NB | UNITED STATES | WALLOPS ISLAND | | | | | | | | | X | | 158 | DETWILER, D. LANGE, K. O. |
| 05/16/69 | 0430 | AC 19.289 | UNITED STATES | FORT CHURCHILL | | | B | | | | | | | | 774 | HUTCHINSON, R. |
| 05/16/69 | 2020 | NASA 4.232 GS | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 202 | BEHRING, W. E. |
| 05/19/69 | 0400 | MP-12 | USSR | 50D 00'S 065D 00'E | | A | | | | | | | | | 76 | HYDROMETEOROLOGICAL SERVICE |
| 05/19/69 | 1600 | MP-12 | USSR | 49D 00'S 065D 00'E | | A | | | | | | | | | 80 | HYDROMETEOROLOGICAL SERVICE |
| 05/19/69 | 2200 | MP-12 | USSR | 48D 00'S 065D 00'E | | A | | | | | | | | | 86 | HYDROMETEOROLOGICAL SERVICE |
| 05/20/69 | 2200 | MP-12 | USSR | 44D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOGICAL SERVICE |
| 05/21/69 | 0803 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 05/21/69 | 1103 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 86 | HYDROMETEOROLOGICAL SERVICE |
| 05/21/69 | 1600 | MP-12 | USSR | 41D 00'S 065D 00'E | | A | | | | | | | | | 83 | HYDROMETEOROLOGICAL SERVICE |
| 05/21/69 | 2200 | MP-12 | USSR | 40D 00'S 065D 00'E | | A | | | | | | | | | 82 | HYDROMETEOROLOGICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/22/69 | 0400 | MP-12 | USSR | 40D 00'S 065D 00'E | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 05/22/69 | 0546 | AH C7.687 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 176 | GOLOMB,D. KITROSSER,D. DYER,G. |
| 05/22/69 | 0737 | AH C8.669 | UNITED STATES | BARKING SANDS | | V | C | | | | | | | | 176 | DANDEKAR,S. TURTLE,J.P. |
| 05/22/69 | 1000 | MP-12 | USSR | 39D 00'S 065D 00'E | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 05/22/69 | 1300 | AO C8.919-C1 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 156 | GOLOMB,D. |
| 05/22/69 | 1503 | AO C7.918-C1 | UNITED STATES | BARKING SANDS | | V | | | | | | | | | 170 | DANDEKAR,S. TURTLE,J.P. |
| 05/23/69 | 2200 | MP-12 | USSR | 34D 00'S 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 05/24/69 | 1100 | MP-12 | USSR | 32D 00'S 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 05/24/69 | 1600 | MP-12 | USSR | 30D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 05/25/69 | 0400 | MP-12 | USSR | 28D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 05/25/69 | 2300 | MP-12 | USSR | 25D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 05/26/69 | 2200 | MP-12 | USSR | 21D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 05/27/69 | 0246 | A30.900-01 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 397 | ROSENBERG,N.W. |
| 05/27/69 | 1600 | MP-12 | USSR | 19D 00'S 065D 00'E | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 05/28/69 | | NASA 14.420 UA | UNITED STATES | WHITE SANDS | | | | | | | | A | | | N/A | HEMENWAY,C.L. |
| 05/28/69 | 0835 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 91 | HYDROMETEOROLOGICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/28/69 | 1126 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 87 | HYDROMETEOROLOGICAL SERVICE |
| 05/30/69 | 0302 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 86 | HYDROMETEOROLOGICAL SERVICE |
| 05/30/69 | 0851 | AF 19.291 | UNITED STATES | FORT CHURCHILL | | | B | | | | | | | | 825 | HUTCHINSON,R. |
| 06/02/69 | 2200 | MP-12 | USSR | 15D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOGICAL SERVICE |
| 06/03/69 | 2200 | MP-12 | USSR | 12D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOGICAL SERVICE |
| 06/04/69 | 0400 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 91 | HYDROMETEOROLOGICAL SERVICE |
| 06/04/69 | 0400 | MP-12 | USSR | 11D 00'S 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 06/04/69 | 0811 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 93 | HYDROMETEOROLOGICAL SERVICE |
| 06/05/69 | 1928 | ESRO C3S/002 | ITALY | KIRUNA | | | | | | | G | | | | 130 | BRINI,D. |
| 06/06/69 | 2200 | MP-12 | USSR | 00D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 06/07/69 | 0400 | MP-12 | USSR | 00D 00'S 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 06/07/69 | 1000 | MP-12 | USSR | 01D 00'S 065D 00'E | | A | | | | | | | | | 93 | HYDROMETEOROLOGICAL SERVICE |
| 06/07/69 | 1600 | MP-12 | USSR | 02D 00'S 065D 00'E | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 06/08/69 | 2200 | MP-12 | USSR | 06D 00'S 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 06/09/69 | 2200 | MP-12 | USSR | 09D 00'S 065D 00'E | | A | | | | | | | | | 87 | HYDROMETEOROLOGICAL SERVICE |
| 06/10/69 | 0400 | MP-12 | USSR | 10D 00'S 065D 00'E | | A | | | | | | | | | 86 | HYDROMETEOROLOGICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/10/69 | 2214 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 87 | HYDROMETEORCLOG-ICAL SERVICE |
| 06/11/69 | 0520 | INCOSPAR 11.30 | INDIA | THUMBA | | A | | | | | | | | | 65 | PISHAROTY, P.R. |
| 06/11/69 | 0805 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 06/11/69 | 1805 | MP-12 | USSR | KAPUSTIN YAR | | F | | D | | | | | | | 167 | UNKNOWN |
| 06/11/69 | 2200 | MP-12 | USSR | 16D 00'N 065D 00'E | | A | | | | | | | | | 85 | HYDROMETEOROLOG-ICAL SERVICE |
| 06/12/69 | 1832 | NASA 13.12 GM | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | 73 | SMITH, W.S. |
| 06/12/69 | 2200 | MP-12 | USSR | 19D 00'N 065D 00'E | | A | | | | | | | | | N/A | HYDROMETEOROLOG-ICAL SERVICE |
| 06/13/69 | 0400 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 06/13/69 | 0630 | KP 3.28 | UNITED STATES | WHITE SANDS | | | | | | | | | | | N/A | BROADFOOT, A.L. |
| 06/13/69 | 1600 | MP-12 | USSR | 22D 00'N 065D 00'E | | A | | | | | | | | | 86 | HYDROMETEOROLOG-ICAL SERVICE |
| 06/13/69 | 1900 | NASA 4.242 UA | UNITED STATES | WHITE SANDS | | G | C | | | | | | | | 172 | BARTH, C.A. KELLY, K. |
| 06/15/69 | 1405 | AO 16.010-1 | UNITED STATES | NATAL | | | A | | | | | | | | 562 | HARVEY, R. LEWIS, E. FIELDS, V. |
| 06/18/69 | 0516 | AD 21.861 | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | B | N/A | UNKNOWN |
| 06/18/69 | 0837 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 06/19/69 | 1606 | P03EH | UNITED KINGDOM | SOUTH UIST | | | C A E | | | E F | | | | | 136 | HALL, J.E. |
| 06/20/69 | 0315 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 166 | UNKNOWN |
| 06/20/69 | 0545 | NASA 4.269 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 181 | MORTON, D.C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/20/69 | 1430 | SUPARCO | PAKISTAN | SONMIANI | | A | | | | | | | | | 59 | RAHMATULLAH,M. JAFRI,S.A. |
| 06/22/69 | 0528 | NASA 4.183 UG | UNITED STATES | NATAL | | | | | | F | | | | | 165 | BOWYER,C.S. |
| 06/24/69 | 1902 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 170 | UNKNOWN |
| 06/25/69 | 0612 | INCOSPAR 11.31 | INDIA | THUMBA | | A | | | | | | | | | 64 | PISHAROTY,P.R. |
| 06/25/69 | 0800 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 92 | HYDROMETEORCLOG-ICAL SERVICE |
| 06/25/69 | 1001 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 06/26/69 | 1800 | AT 03.536 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 216 | HINTEREGGER,H.E. |
| 06/26/69 | 1830 | NASA 6.53 UI | UNITED STATES | NATAL | | | C D E | | | | | | | | 775 | HANSON,W.B. |
| 06/28/69 | 0035 | NASA 14.387 UA | UNITED STATES | WALLOPS ISLAND | | F | | | | | | | | | 106 | ANDERSON,J.G. |
| 07/01/69 | 1815 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 141 | INST OF EXPERI-MENTAL METECROLOGY |
| 07/01/69 | 2100 | AH 07.888 | UNITED STATES | EGLIN AFB | | G | | | | | | | | | 137 | PHILBRICK,C.R. |
| 07/02/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 94 | HYDROMETEORCLOG-ICAL SERVICE |
| 07/02/69 | 1001 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 87 | HYDROMETEORCLOG-ICAL SERVICE |
| 07/03/69 | 0329 | MP-12 | USSR | KAPUSTIN YAR | | B C F | | | | | | | | | 165 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/05/69 | 1945 | ESRO S38/001 | BELGIUM | SARDINIA | | V | | | | | | | | | N/A | BREDOHL,H. |
| 07/06/69 | 1950 | ESRO S64/001 | BELGIUM | SARDINIA | | V | | | | | | | | | 275 | ACKERMAN,M. |
| 07/08/69 | 1820 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 148 | INST OF EXPERI-MENTAL METECROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/09/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 07/09/69 | 1755 | MP-12 | USSR | VOLGOGRAD | | V | | | | | | | | | 150 | INST OF EXPERIMENTAL METEOROLOGY |
| 07/10/69 | 0807 | MP-12 | USSR | KAPUSTIN YAR | | G C | | | | | | | | | 162 | INST OF EXPERIMENTAL METEOROLOGY |
| 07/10/69 | 1231 | CENTAURE 1 | FRANCE | MEDTN. TEST CENTER | | V | | | | | | | | | 109 | UNKNOWN |
| 07/10/69 | 1750 | CENTAURE 1 | FRANCE | MEDTN. TEST CENTER | | V | | | | | | | | | 114 | UNKNOWN |
| 07/11/69 | 1755 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 148 | INST OF EXPERIMENTAL METEOROLOGY |
| 07/11/69 | 1942 | ESRO S38/002 | BELGIUM | SARDINIA | | V | | | | | | | | | 203 | BREDOHL, H. |
| 07/13/69 | 1941 | ESRO S54/002 | BELGIUM | SARDINIA | | V | | | | | | | | | 280 | ACKERMAN, M. |
| 07/14/69 | 2353 | SL-722 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | C | | | | | | | | 192 | KAISER, T. R. BEYNON, W. J. G. WILLIAMS, E. R. HUGHES, A. |
| 07/16/69 | 0250 | NASA 18.32 UG | UNITED STATES | WALLOPS ISLAND | B | | | | | F | | | | | 209 | KRAUSHAAR, W. BUNNER, A. RAUSHAAR, W. L. BUNNER, A. |
| 07/16/69 | 0530 | INCOSPAR 11.32 | INDIA | THUMBA | | A | | | | | | | | | 64 | PISHAROTY, P. R. |
| 07/16/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 92 | HYDROMETEOROLOGICAL SERVICE |
| 07/16/69 | 1004 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 86 | HYDROMETEOROLOGICAL SERVICE |
| 07/16/69 | 1434 | SUPARCO | PAKISTAN | SONMIANI | | A | | | | | | | | | 65 | RAHMATULLAH, M. JAFRI, S. A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/16/69 | 2233 | SL-725 | UNITED KINGDOM AUSTRALIA | WOOMERA | C | | E C | | | | | | | | 244 | BYRNE,F.N. BRENN,G. BEYNON,W.J.H. HANNA,P.B. MCKINLEY,I. WILLIA |
| 07/23/69 | 0550 | INCOSPAR 11.33 | INDIA | THUMBA | | A | | | | | | | | | 64 | BISHAROTY,P.R. |
| 07/23/69 | 0903 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 07/23/69 | 1001 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 07/23/69 | 2100 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 07/24/69 | 0019 | NASA 14.349 UA | UNITED STATES | WALLOPS ISLAND | E | G | D | | | | | | | | 104 | PEARCE,J.B. |
| 07/24/69 | 0954 | NASA 14.348 UA | UNITED STATES | WALLOPS ISLAND | E | G | D | | | | | | | | 105 | PEARCE,J.B. |
| 07/24/69 | 2355 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 145 | INST OF EXPERIMENTAL METEOROLOGY |
| 07/25/69 | 0119 | MP-12 | USSR | 45D 00'N 030D 00'W | | G | | | | | | | | | 166 | INST OF EXPERIMENTAL METEOROLOGY |
| 07/25/69 | 0130 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 172 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/25/69 | 0200 | MP-12 | USSR | VOLGOGRAD | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 07/25/69 | 0200 | MP-12 | USSR | 67D 40'S 045D 51'E | | A | | | | | | | | | 94 | HYDROMETEOROLOGICAL SERVICE |
| 07/25/69 | 0410 | SL-721 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | C | | | | | | | | 213 | KAISER,T.R. HUGHES,A. BEYNON,W.J.H. WILLIAMS,E.R. |
| 07/25/69 | 2203 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 170 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/25/69 | 2350 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 145 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/27/69 | 2147 | MP-12 | USSR | 31D 00'N 034D 00'W | | G | | | | | | | | | 168 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/27/69 | 2237 | MP-12 | USSR | 30D 59'N 034D 50'W | | G | | | | | | | | | 164 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/27/69 | 2327 | MP-12 | USSR | 31D 05'N 034D 55'W | | G | | | | | | | | | 170 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/28/69 | 0017 | MP-12 | USSR | 31D 15'N 034D 56'W | | G | | | | | | | | | 167 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/28/69 | 1415 | P040H | UNITED KINGDOM | SOUTH UIST | | | C E | | | | | | | | 121 | BULLOUGH, K. |
| 07/29/69 | 2257 | SL-730 | UNITED KINGDOM AUSTRALIA | WOOMERA | C | | C E | | | | | | | | 196 | BYRNE, F. N. BEYNON, W. J. G. WILLMORE, A. P. HANNA, B. MCKINLEY, I. WRENN. |
| 07/30/69 | 0200 | MP-12 | USSR | 67D 40'S 045D 51'E | | A | | | | | | | | | 84 | HYDROMETEOROLOG-ICAL SERVICE |
| 07/30/69 | 0301 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 07/30/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 07/30/69 | 1445 | SUPARCO | PAKISTAN | SONMIANI | | A | | | | | | | | | 64 | RAHMATULLAH, M. JAFRI, S. A. |
| 07/30/69 | 2007 | MP-12 | USSR | KAPUSTIN YAR | | B C F | | | | | | | | | 171 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 08/02/69 | 1137 | P012N | UNITED KINGDOM | SOUTH UIST | | | C E | | | | | | | | 126 | BULLOUGH, K. |
| 08/03/69 | 0325 | MP-12 | USSR | 00D 03'S 017D 44'W | | G | | | | | | | | | 164 | INST OF EXPERI-MENTAL METEOROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/03/69 | 0415 | MP-12 | USSR | 00D 05'S 017D 34'W | | G | | | | | | | | | 168 | INST OF EXPERI-MENTAL METEOROLOGY |
| 08/03/69 | 0505 | MP-12 | USSR | 00D 05'N 017D 31'W | | G | | | | | | | | | 165 | INST OF EXPERI-MENTAL METEOROLOGY |
| 08/03/69 | 0551 | MP-12 | USSR | 00D 08'N 017D 34'W | | G | | | | | | | | | 169 | INST OF EXPERI-MENTAL METEOROLOGY |
| 08/03/69 | 0700 | MP-12 | USSR | 00D 19'N 017D 46'W | | G | | | | | | | | | 172 | INST OF EXPERI-MENTAL METEOROLOGY |
| 08/06/69 | 0200 | MP-12 | USSR | 67D 40'S 045D 51'E | | A | | | | | | | | | 94 | HYDROMETEOROLOG-ICAL SERVICE |
| 08/06/69 | 0550 | INCOSPAR 11.35 | INDIA | THUMBA | | A | | | | | | | | | 64 | PISHAROTY, P.R. |
| 08/06/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 89 | HYDROMETEOROLOG-ICAL SERVICE |
| 08/07/69 | 0336 | AT 07.394 | UNITED STATES | FORT CHURCHILL | | Y V | | | | | | | | | 195 | FAIRE, A.C. |
| 08/07/69 | 0530 | AO 07.902-01 | UNITED STATES | FORT CHURCHILL | | | D | | | | | | | | 84 | NARCISI, R.S. ULWICK, J.C. |
| 08/07/69 | 0535 | AT 07.179 | UNITED STATES | FORT CHURCHILL | | Y V | | | | | | | | | 195 | FAIRE, A.C. |
| 08/07/69 | 1215 | K -C9M-27 S -C7S-001 | JAPAN | KAGOSHIMA | | | C | | B | | | | | | 327 | OYA, H. ASO, T. OGAWA, T. SAKURAI, H. |
| 08/07/69 | 1215 | K -C9M-27 S -C7S-002 | JAPAN | KAGOSHIMA | | | | | | | F | | | | 327 | MIYAMOTO, S. KITAMURA, T. |
| 08/07/69 | 1215 | K -C9M-27 S -C7S-003 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 327 | YABUZAKI, T. TSUKADA, N. KONDO, S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/07/69 | 1215 | K -C9M-27<br>S -C75-0C4 | JAPAN | KAGOSHIMA | | | | | | | G | | | | 327 | TAKEUCHI,H.<br>IMAI,T.<br>IWASAKI,S.<br>YAMASHITA,T.<br>MATSUSHIMA,K. |
| 08/08/69 | 1200 | S -21C-02<br>T -C78-001 | JAPAN | KAGOSHIMA | | | | | | | F | | | | 101 | MIYAMOTO,S.<br>KITAMURA,T. |
| 08/11/69 | 0130 | ESROCS1/001 | FRANCE<br>SWEDEN | KIRUNA | | K | | | | | | | | | 147 | ROSSLER,F.<br>WITT,G. |
| 08/13/69 | 0200 | MP-12 | USSR | 67D 40'S 045D 51'E | | A | | | | | | | | | 91 | HYDROMETEOROLOG-ICAL SERVICE |
| 08/13/69 | 0523 | AD C7.902-02 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 112 | UNKNOWN |
| 08/13/69 | 0630 | NASA 14.422 UA | UNITED STATES | WHITE SANDS | | | | | B | | | A | | | N/A | HEMENWAY,C.L.<br>AGGSON,T. |
| 08/14/69 | 0201 | ESROC58/001 | FED REP OF GERMANY<br>FRANCE<br>SWEDEN | KIRUNA | | K | D | | | | | A | | | 112 | ZAHRINGER,J.<br>FECHTIG,H.<br>RAUSER,P.<br>ROSSLER,F.<br>LINDBLAD,B.A. |
| 08/15/69 | 1430 | SUPARCO | PAKISTAN | SONMIANI | | A | | | | | | | | | 65 | RAHMATULLAH,M.<br>JAFRI,S.A. |
| 08/15/69 | 1456 | A003.903-C1 | UNITED STATES | WHITE SANDS | | | | | | D | | | | | 211 | HINTEREGGER,H.E.<br>HIGGINS,J.E.<br>CHAGNON,C.W. |
| 08/20/69 | 0200 | MP-12 | USSR | 67D 40'S 045D 51'E | | A | | | | | | | | | 88 | HYDROMETEOROLOG-ICAL SERVICE |
| 08/20/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 90 | HYDROMETEOROLOG-ICAL SERVICE |
| 08/20/69 | 1057 | INCOSPAR 11.36 | INDIA | THUMBA | | A | | | | | | | | | 64 | PISHAROTY,P.R. |
| 08/21/69 | 0157 | SL-6C5 | UNITED KINGDOM<br>AUSTRALIA | WOOMERA | | | | | | F | | | | | 197 | EVANS,K.D.<br>WATSON,D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/21/69 | 1409 | NASA 18.78 GA | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | A | 227 | GRIMES,D.<br>HARPOLD,D.<br>CARIGNAN,G. |
| 08/21/69 | 1509 | NASA 18.102 GA | UNITED STATES | WALLOPS ISLAND | | | C<br>B | | | | | | | | 318 | CARIGNAN,G.R.<br>BRACE,L.H. |
| 08/21/69 | 1539 | NASA 14.431 UM | UNITED STATES | WALLOPS ISLAND | | F | | | | | | | | | 200 | HORVATH,J.J. |
| 08/22/69 | 1036 | NASA 14.423 UG | UNITED STATES | WHITE SANDS | | | | | B | | | A | | | 158 | HEMENWAY,C.L.<br>AGGSON,T. |
| 08/24/69 | 0803 | K-C9M-26<br>S-C77-001 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 341 | KAMADA,T.<br>HAYAKAWA,M.<br>YAMAGUCHI,T. |
| 08/24/69 | 0803 | K-C9M-26<br>S-C77-002 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 341 | IWAI,A.<br>KAMADA,T.<br>OTSU,J.<br>KURAHASHI,K.<br>HAYAKAWA,M. |
| 08/27/69 | 0200 | MP-12 | USSR | 67D 40'S 045D 51'E | | A | | | | | | | | | 90 | HYDROMETEORCLOG-ICAL SERVICE |
| 08/27/69 | 1037 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | N/A | HYDROMETEORCLOG-ICAL SERVICE |
| 09/03/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 93 | HYDROMETEORCLOG-ICAL SERVICE |
| 09/03/69 | 1003 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 93 | HYDROMETEORCLOG-ICAL SERVICE |
| 09/05/69 | | NE 4.234 | UNITED STATES | WHITE SANDS | | | | | | X | | | | | N/A | UNKNOWN |
| 09/06/69 | 0200 | MT-135-41<br>T-C82 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 59 | SHIMIZU,I.<br>SAKAI,I. |
| 09/06/69 | 1135 | K-10-05<br>S-C78-001 | JAPAN | KAGOSHIMA | C | | | | | | | | | | 247 | NAKAMURA,M.<br>KASHIWAGI,T. |
| 09/06/69 | 1135 | K-10-05<br>S-C78-002 | JAPAN | KAGOSHIMA | | | | | | C | | | | | 248 | TANABE,H.<br>SAITO,K.<br>ASHIDA,S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/06/69 | 1135 | K -1C -05<br>S -C78-003 | JAPAN | KAGOSHIMA | | | | | | | C | | | | 248 | MATSUMOTO,T.<br>NISHIMURA,T. |
| 09/06/69 | 1135 | K -1C -05<br>S -C78-004 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 242 | MAKINO,T.<br>HAGIWARA,Y. |
| 09/06/69 | 1135 | K -1C -05 | JAPAN | KAGOSHIMA | | | E | | | | | | | | 248 | KAWASHIMA,N. |
| 09/06/69 | 1135 | K -1C -05<br>S -C78-006 | JAPAN | KAGOSHIMA | | | E | | | | | | | | 248 | HIRAO,K.<br>OYAMA,K. |
| 09/06/69 | 1410 | AO 16.010-2 | UNITED STATES | NATAL | | | A | | | | | | | | 516 | HARVEY,R.<br>LEWIS,E.<br>FIELDS,V. |
| 09/07/69 | 0200 | MT-135-P -002<br>T -C84 | JAPAN | KAGOSHIMA | A<br>C | | | | | | | | | | 53 | SHIMIZU,I.<br>SAKAI,I. |
| 09/07/69 | 0500 | MT-135-42<br>T -C83 | JAPAN | KAGOSHIMA | A<br>C | | | | | | | | | | 57 | SHIMIZU,I.<br>SAKAI,I. |
| 09/10/69 | 0200 | MP-12 | USSR | 67D 40'S 045D 51'E | A | | | | | | | | | | 91 | HYDROMETEORCLOGICAL SERVICE |
| 09/10/69 | 0435 | NASA 4.312 UG | UNITED STATES | WHITE SANDS | | | | | | | B | | | | 157 | HARWIT,M. |
| 09/10/69 | 0900 | MP-12 | USSR | KHEISA ISLAND | A | | | | | | | | | | 93 | HYDROMETEORCLOGICAL SERVICE |
| 09/10/69 | 1430 | SUPARCO | PAKISTAN | SONMIANI | A | | | | | | | | | | 63 | RAHMATULLAH,M.<br>JAFRI,S.A. |
| 09/10/69 | 2046 | NASA 14.395 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>D<br>E | | | | | | | | 205 | MECHTLY,E.A.<br>SMITH,L.G. |
| 09/11/69 | - | NASA 4.193 LS | UNITED STATES | WHITE SANDS | | | | | | X | | | | | N/A | DERTEL. |
| 09/11/69 | 0107 | AAD-2 -122 | CANADA | FORT CHURCHILL | C | G | C | | | | | A | | | 137 | RYDER,P.<br>WLOCHOWICZ,R.<br>MCNAMARA,A.G. |
| 09/12/69 | 0102 | AAD-2 -123 | CANADA | FORT CHURCHILL | C | G | C | | | | | A | | | 138 | RYDER,P.<br>WLOCHOWICZ,R.<br>MCNAMARA,A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/12/69 | 0406 | NASA 14.394 UI | UNITED STATES | WALLOPS ISLAND | | | C D E | | | | | | | A | 189 | MECHTLY, E.A. SMITH, L.G. |
| 09/15/69 | 1334 | P058H | UNITED KINGDOM | SOUTH UIST | | | C A E | | | E F | | | | | N/A | HALL, J.E. |
| 09/16/69 | 1950 | MP-12 | USSR | 00D 00' 065D 00'E | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 09/16/69 | 2143 | MP-12 | USSR | 00D 00' 065D 00'E | | A | | | | | | | | | N/A | HYDROMETEOROLOGICAL SERVICE |
| 09/17/69 | 0200 | MP-12 | USSR | 67D 40'S 045D 51'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 09/17/69 | 0910 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 98 | HYDROMETEOROLOGICAL SERVICE |
| 09/17/69 | 1002 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 09/17/69 | 1845 | NASA 4.166 DS | UNITED STATES | WHITE SANDS | | | | | | E | | | | C | 218 | HINTEREGGER, H.E. |
| 09/17/69 | 1950 | MP-12 | USSR | 00D 00' 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 09/17/69 | 2140 | MP-12 | USSR | 00D 00' 065D 00'E | | A | | | | | | | | | 87 | HYDROMETEOROLOGICAL SERVICE |
| 09/18/69 | 1145 | MP-12 | USSR | 00D 00' 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 09/18/69 | 2159 | MP-12 | USSR | 00D 00' 065D 00'E | | A | | | | | | | | | 87 | HYDROMETEOROLOGICAL SERVICE |
| 09/18/69 | 2308 | MP-12 | USSR | 00D 00' 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 09/19/69 | 0315 | NASA 19.05 NE | UNITED STATES | NATAL | | | | | A | | | | | | 856 | BRANDON, G. GREINER, D. |
| 09/19/69 | 2010 | MP-12 | USSR | 00D 00' 065D 00'E | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/19/69 | 2232 | MP-12 | USSR | 00D 00' 065D 00'E | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 09/20/69 | 2008 | MP-12 | USSR | 00D 00' 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 09/21/69 | 0805 | NB 3.202 | UNITED STATES | WHITE SANDS | | | | | | | D | | | C | 184 | PATTERSON,N.P.<br>HENRY,R.C.<br>CARRUTHERS,G.R. |
| 09/23/69 | 1636 | NASA 4.170 US | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 174 | JEFFRIES,J.T.<br>MCALLISTER,H.C. |
| 09/24/69 | 0200 | MP-12 | USSR | 67D 40'S 045D 51'E | | A | | | | | | | | | 95 | HYDROMETEOROLOGICAL SERVICE |
| 09/24/69 | 0408 | MP-12 | USSR | KAPUSTIN YAR | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 09/24/69 | 0920 | MP-12 | USSR | KHEISA ISLAND | | A | | | | | | | | | 87 | HYDROMETEOROLOGICAL SERVICE |
| 09/24/69 | 1745 | NASA 4.294 US | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 200 | RENSE,W.A.<br>BARTH,C.A.<br>BRUNER,E. |
| 09/25/69 | 2315 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 09/26/69 | 2005 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 09/26/69 | 2200 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 91 | HYDROMETEOROLOGICAL SERVICE |
| 09/27/69 | 0205 | MT-135-P -003<br>T -087 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 52 | SHIMIZU,I.<br>SAKAI,I. |
| 09/27/69 | 0500 | MT-135-43<br>T -088 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 49 | SHIMIZU,I.<br>SAKAI,I. |
| 09/27/69 | 1900 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/28/69 | 2003 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 09/28/69 | 2200 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 90 | HYDROMETEOROLOGICAL SERVICE |
| 09/29/69 | 2123 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 88 | HYDROMETEOROLOGICAL SERVICE |
| 09/29/69 | 2231 | MP-12 | USSR | 20D 00'S 065D 00'E | | A | | | | | | | | | 89 | HYDROMETEOROLOGICAL SERVICE |
| 09/30/69 | 2341 | P046H | UNITED KINGDOM | SOUTH UIST | | | C A E | | | E | | | | | N/A | HALL, J.E. BRYANT, D.A. DICKENSON, P.H.G. |
| 10/01/69 | 0221 | P052H | UNITED KINGDOM | SOUTH UIST | | | C A E | | | E | | | | | N/A | HALL, J.E. BRYANT, D.A. DICKENSON, P.H.G. |
| 10/01/69 | 0520 | P051H | UNITED KINGDOM | SOUTH UIST | | | C A E | | | E | | | | | N/A | HALL, J.E. BRYANT, D.A. DICKENSON, P.H.G. |
| 10/01/69 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/03/69 | 0224 | NASA 4.279 UG | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 158 | BRADT, H.V. |
| 10/04/69 | 0515 | AH 08.645 | UNITED STATES | WALLOPS ISLAND | | | | | | | F | | | | N/A | GARMIRE, G. |
| 10/05/69 | 2228 | S29/1 | UNITED KINGDOM SWEDEN | KIRUNA | | V | C E | D | | | | | | | 225 | BYRNE, F.N. BRYANT, D.A. SAYERS, J. |
| 10/08/69 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/08/69 | 0405 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/08/69 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/10/69 | 0119 | NASA 15.53 GI | UNITED STATES | RESOLUTE BAY | | | C | | | | | | | | 110 | KANE, J.A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/10/69 | 0749 | P02CH | UNITED KINGDOM | SOUTH UIST | | | C B | C | | | | | | | 130 | ROTHWELL,P. WILSON,J.W.G. |
| 10/10/69 | 2001 | ESROCS2/002 | BELGIUM | KIRUNA | B | | | | | | | | | | 135 | MONFILS,A. |
| 10/11/69 | 0200 | AH- 07.893 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 118 | UNKNOWN |
| 10/11/69 | 1105 | MP-12 | USSR | 64D 38'N 032D 18'E | | | C | | | | | | | | 158 | INST OF EXPERIMENTAL METECROLOGY |
| 10/11/69 | 1936 | P038H | UNITED KINGDOM | SOUTH UIST | | V | | | | | | | | | N/A | ROTHWELL,P. MARTELLI,G. |
| 10/11/69 | 2000 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/12/69 | 1950 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/12/69 | 2144 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/13/69 | 1955 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/13/69 | 2155 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/14/69 | 0400 | NC 3.136 | UNITED STATES | WHITE SANDS | | | C D | | | | | | | | 217 | YOUNG,J.M. WELLER,C.S. JOHNSON,C.Y. |
| 10/14/69 | 0822 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 120 | INST OF EXPERIMENTAL METECROLOGY |
| 10/14/69 | 1843 | P014H | UNITED KINGDOM | SOUTH UIST | | | C B | | | | | | | | N/A | BOWEN,P.J. |
| 10/14/69 | 2145 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/15/69 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/15/69 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/15/69 | 1846 | SL-EE1 | UNITED KINGDOM AUSTRALIA | WOOMERA | | Z V | | | | | | | | | 318 | REES,D. J. |
| 10/15/69 | 1957 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/15/69 | 2145 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/15/69 | 2243 | NASA 16.06 GR | UNITED STATES | WALLOPS ISLAND | | | | | | A | | | | C | 2575 | WEBER,R. P. |
| 10/16/69 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/16/69 | 1002 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/16/69 | 1030 | NASA 4.256 GG | UNITED STATES | WHITE SANDS | | | | | | | C | | | | 205 | SMITH,A. M. |
| 10/17/69 | 0804 | P016H | UNITED KINGDOM | SOUTH UIST | | | C E | C | | | | | | | N/A | WILSON,J. W. G. ROTHWELL,P. |
| 10/17/69 | 0915 | SL-EE2 | UNITED KINGDOM AUSTRALIA | WOOMERA | | Z V | | | | | | | | | 318 | REES,D. J. |
| 10/17/69 | 2209 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 166 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/17/69 | 2227 | S29/2 | UNITED KINGDOM SWEDEN | KIRUNA | | V | C E | D | | | | | | | 225 | BYRNE,F. N. BRYANT,D. A. SAYERS,J. |
| 10/18/69 | 1107 | MP-12 | USSR | 60D 48'N 036D 30'W | | | C | | | | | | | | 165 | INST OF EXPERIMENTAL METEOROLOGY |
| 10/18/69 | 1747 | MP-12 | USSR | 61D 17'N 037D 28'W | | | C | | | | | | | | 160 | INST OF EXPERIMENTAL METEOROLOGY |
| 10/18/69 | 2136 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/18/69 | 2236 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/19/69 | 1906 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/19/69 | 2200 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 83 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/20/69 | 1920 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/20/69 | 2217 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/21/69 | 1232 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 164 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/21/69 | 1854 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/21/69 | 2058 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/22/69 | 0610 | SL-621 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | C E | | | F | F | | | C | 216 | BOYD, R. L. F. WILLMORE, P. A. DORLING, E. B. |
| 10/22/69 | 0931 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 116 | INST OF EXPERIMENTAL METECROLOGY |
| 10/22/69 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/23/69 | 0500 | AD C3.910-02 | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 190 | UNKNOWN |
| 10/24/69 | 0544 | ESROS68/001 | ITALY | SARDINIA | | | | A | | | | | | | 184 | BRINI, D. |
| 10/24/69 | 1233 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 160 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/25/69 | 0600 | AKF-3B-050 | CANADA | RESOLUTE BAY | C | | | B | | | | | | | 192 | WILSON, B. G. HARRISON, A. W. SHUKLA, P. G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/26/69 | 0640 | AKF-3B-051 | CANADA | RESOLUTE BAY | C | | | B | | | | | | | 197 | WILSON, B.G.<br>HARRISON, A.W.<br>SHUKLA, P.G. |
| 10/29/69 | 0207 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/29/69 | 0900 | P017H | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/02/69 | 2020 | AJ 17.602 | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 120 | ULWICK, J.C. |
| 11/02/69 | 2211 | A30.900-02 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 96 | WEEKS, L.H. |
| 11/03/69 | 0605 | AJ 17.758 | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 126 | ULWICK, J.C. |
| 11/03/69 | 0629 | AO C7.902-03 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 117 | NARCISI, R.S. |
| 11/03/69 | 0642 | AT C7.396 | UNITED STATES | FORT CHURCHILL | | V<br>Y | | | | | | | | | 210 | FAIRE, A.C. |
| 11/03/69 | 0730 | AG C7.882 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 138 | NARCISI, R.S. |
| 11/03/69 | 1232 | AT C7.397 | UNITED STATES | FORT CHURCHILL | | V<br>Y | | | | | | | | | 167 | FAIRE, A.C. |
| 11/03/69 | 1352 | AJ 17.616 | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 123 | ULWICK, J.C. |
| 11/03/69 | 1711 | AJ 17.906-1 | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 126 | ULWICK, J.C. |
| 11/03/69 | 1730 | AH C7.886 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 144 | NARCISI, R.S. |
| 11/03/69 | 1747 | AO C7.902-04 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 122 | NARCISI, R.S. |
| 11/03/69 | 1840 | NIRO | UNITED STATES | FORT CHURCHILL | | X | | | | | | | | | 46 | UNKNOWN |
| 11/03/69 | 2245 | 17.611 | UNITED STATES | FORT CHURCHILL | | X | | | | | | | | | 83 | UNKNOWN |
| 11/03/69 | 2308 | AT C7.398 | UNITED STATES | FORT CHURCHILL | | Y<br>V | | | | | | | | | 191 | FAIRE, A.C. |
| 11/04/69 | 0829 | NE 3.215 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 200 | PURCELL, J.D. |
| 11/04/69 | 1929 | NASA 4.136 DS | UNITED STATES | WHITE SANDS | | | | | | E | | | | C | 200 | TOUSEY, R.<br>PURCELL, J.D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/04/69 | 2027 | NASA 4.283 CS | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 181 | ZEHNPFENNING,T.F.<br>VAIANA,G.<br>VAN SPEYBROECK,L. |
| 11/04/69 | 2206 | A30.900-03 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 99 | WEEKS,L.H. |
| 11/04/69 | 2250 | AH C7.893 | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | 143 | NARCISI,R.S. |
| 11/04/69 | 2308 | AJ 17.617 | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | 126 | ULWICK,J.C. |
| 11/05/69 | 0207 | M-1CC | USSR | MOLODEZHNAYA | | J | | | | | | | | | 90 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 11/05/69 | 0811 | MP-12 | USSR | 52D 46'N 016D 40'W | | | C | | | | | | | | 162 | INST OF EXPERI-MENTAL METECROLOGY |
| 11/05/69 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 11/05/69 | 1112 | MP-12 | USSR | 52D 59'N 017D 08'W | | | C | | | | | | | | 160 | INST OF EXPERI-MENTAL METECROLOGY |
| 11/05/69 | 1118 | AAF-3B-049 | CANADA | RESOLUTE BAY | B | | | B | | | | | | | 200 | WHALEN,B.A.<br>ANGER,C.D.<br>MCNAMARA,A.G. |
| 11/07/69 | 0251 | AH C7.892 | UNITED STATES | FORT CHURCHILL | | | D | | | | | | | | 122 | NARCISI,R.S. |
| 11/08/69 | 0730 | NF 9.207 | UNITED STATES | WALLOPS ISLAND | | | | | | B | | | | | 189 | SHIVANANDAN,K.<br>MCNUTT,D.P. |
| 11/09/69 | 1647 | MP-12 | USSR | 41D 15'N 018D 21'W | | | C | | | | | | | | 162 | INST OF EXPERI-MENTAL METECROLOGY |
| 11/10/69 | 2100 | ESROS46/001 | FED REP OF GERMANY<br>SWEDEN<br>UNITED KINGDOM | KIRUNA | | | C | D | | | | | | | 214 | UNGER,L.<br>REME,H.<br>GIBBONS,W. |
| 11/12/69 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 11/18/69 | 0217 | SL-602 | UNITED KINGDOM<br>AUSTRALIA | WOOMERA | | | | | | | F | | | | 208 | WILLMORE,A.P.<br>GILMORE,D.J. |
| 11/18/69 | 1334 | D-0C3 | FRANCE | LANDES TEST CENTER | | | D | | | | | | | | N/A | BEGHIN,M. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/19/69 | 0903 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/20/69 | 0030 | SL-E01 | UNITED KINGDOM AUSTRALIA | WOOMERA | | G | | | | D<br>X | | | | | 242 | SHENTON,D.B.<br>BURTON,W.M.<br>WILDMAN,P.J.L.<br>KERLEY,M.J. |
| 11/26/69 | 0039 | NIKE-CAJUN | NORWAY<br>FED REP OF GERMANY | ANDOYA | X | | X | X | | | | | | | 107 | LANDMARK,B.<br>PIELDER,W.<br>ZAHRINGER,J. |
| 11/26/69 | 0155 | M-1CC | USSR | MOLODEZHNAYA | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/26/69 | 2332 | SL-E03 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | | | | X<br>C | | | | | 180 | SHENTON,D.B.<br>BRADLEY,D.<br>BATES,B. |
| 11/27/69 | 0529 | ESROC62/001 | FED REP OF GERMANY SWEDEN | KIRUNA | | | | D | | | | | | | 160 | WILHELM,K.<br>RAWER,K.<br>HULTQVIST,B. |
| 11/27/69 | 0631 | ESROC62/002 | FED REP OF GERMANY SWEDEN | KIRUNA | | | | D | | | | | | | 164 | WILHELM,K.<br>RAWER,K.<br>HULTQVIST,B. |
| 11/27/69 | 1003 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/30/69 | 0258 | SPARROW/HV ARC | NORWAY | ANDOYA | X | | X | X | | | | | | | 100 | JOHANNESSEN,A. |
| 12/03/69 | 1851 | AMF-3 -047 | CANADA | FORT CHURCHILL | | G | | | | | | | | | 120 | SCHIFF,H.I.<br>MEGILL,R.L. |
| 12/03/69 | 2312 | AMF-3 -046 | CANADA | FORT CHURCHILL | | G | | | | | | | | | 120 | SCHIFF,H.I.<br>MEGILL,R.L. |
| 12/05/69 | | NASA 4.175 UG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | N/A | UNKNOWN |
| 12/05/69 | | NASA 14.353 UG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | N/A | HEMENWAY,C.L. |
| 12/05/69 | 0930 | AH C7.680 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 158 | ROSENBERG,N.W. |
| 12/05/69 | 1000 | AH C7.681 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 508 | ROSENBERG,N.W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/05/69 | 1000 | AH 07.681 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 155 | ROSENBERG,N.W. |
| 12/05/69 | 1056 | AH 07.676 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 495 | ROSENBERG,N.W. |
| 12/07/69 | 0035 | ISRO 45.03 | INDIA | THUMBA | | | C | | | | F | | | | 125 | RAO,U.R. DEGAONKAR,S.S. |
| 12/07/69 | 0135 | ISRO 45.03 | INDIA | THUMBA | | | C | | | | F | | | A | 123 | GUPTA,S.C. MATHUR,M.C. ASHIYA,T. KATHIRVEL,K. |
| 12/09/69 | 1449 | SKUA-3 | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 100 | ROSE,G. WIDDEL,H.U. |
| 12/10/69 | 0155 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/10/69 | 0431 | AO 07.907-01 | UNITED STATES | FORT CHURCHILL | B | | C E | | B | | | | | | 168 | SMIDDY,M. MAHON,H. |
| 12/10/69 | 0800 | MP-12 | USSR | KAPUSTIN YAR | | G | D | | | | | | | | 165 | INST OF EXPERIMENTAL METECROLOGY |
| 12/10/69 | 1154 | SKUA-3 | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 95 | ROSE,G. WIDDEL,H.U. |
| 12/10/69 | 2059 | MP-12 | USSR | 62D 12*N 028D 38*W | | | C | | | | | | | | 160 | INST OF EXPERIMENTAL METECROLOGY |
| 12/10/69 | 2213 | MP-12 | USSR | 62D 37*N 028D 22*W | | | C | | | | | | | | 160 | INST OF EXPERIMENTAL METECROLOGY |
| 12/11/69 | 1001 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/11/69 | 1202 | SKUA-3 | FED REP OF GERMANY | ARENOSELLO | | X | X | | | | | | | | 100 | ROSE,G. WIDDEL,H.U. |
| 12/12/69 | 0230 | AH 07.682 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 155 | ROSENBERG,N.W. |
| 12/12/69 | 1304 | S24F | UNITED KINGDOM | SOUTH UIST | | B | C | | | | | | | | 79 | WILLIAMS,E.R. |
| 12/12/69 | 2213 | KP 3.26 | UNITED STATES | WHITE SANDS | | | | | | | | | | | N/A | HUNTEN. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/13/69 | | NASA 4.252 GG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | N/A | BOGGESS, A. |
| 12/13/69 | | NASA 14.445 CM | UNITED STATES | WALLOPS ISLAND | | V | F | | | | | | | | N/A | SMITH, L. G. |
| 12/14/69 | | NASA 14.446 CM | UNITED STATES | WALLOPS ISLAND | | V | F | | | | | | | | N/A | SMITH, L. G. |
| 12/15/69 | 0227 | AAF-4 -020 | CANADA | FORT CHURCHILL | E | | C | | | | | | | | N/A | WHALEN, B. A.<br>SHEPHERD, G. G.<br>MONTALBETTI, R. |
| 12/16/69 | 0800 | MP-12 | USSR | KAPUSTIN YAR | | G | D | | | | | | | | 163 | INST OF EXPERIMENTAL METEOROLOGY |
| 12/16/69 | 1443 | S25H | UNITED KINGDOM | SOUTH UIST | | B | C | | | | | | | | 89 | WILLIAMS, E. R. |
| 12/17/69 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/17/69 | 0915 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/17/69 | 1830 | NASA 4.167 DS | UNITED STATES | WHITE SANDS | | | | | | E | | | | C | 204 | HINTEREGGER, H. E. |
| 12/18/69 | 0015 | MP-12 | USSR | KAPUSTIN YAR | | G | D | | | | | | | | 166 | INST OF EXPERIMENTAL METEOROLOGY |
| 12/18/69 | 0407 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/18/69 | 0600 | MP-12 | USSR | KAPUSTIN YAR | | G | D | | | | | | | | 162 | INST OF EXPERIMENTAL METEOROLOGY |
| 12/19/69 | 1115 | MP-12 | USSR | KAPUSTIN YAR | | G | D | | | | | | | | 165 | INST OF EXPERIMENTAL METEOROLOGY |
| 12/24/69 | 0430 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/29/69 | 1710 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/31/69 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/02/70 | 0705 | ISRO-30.01 | INDIA | THUMBA | | | C | | | E | | | | | 125 | SOMAYAJULU, Y. V. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/05/70 | 1423 | UCL C1 | UNITED KINGDOM | KIRUNA | | A C | | | | | | | | | 77 | GROVES, G. V.<br>SCOTT, A. F. D.<br>HAMILTON, R. A.<br>ALMOND, R. |
| 01/06/70 | 2200 | M-1CC | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/07/70 | 0200 | M-1CC | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/07/70 | 1425 | UCL C2 | UNITED KINGDOM | KIRUNA | | A C | | | | | | | | | 75 | GROVES, G. V.<br>SCOTT, A. F. D.<br>HAMILTON, R. A.<br>ALMOND, R.<br>THEON, J. S. |
| 01/07/70 | 2025 | M-1CC | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/07/70 | 2218 | M-1CC | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/08/70 | 2034 | M-1CC | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/09/70 | 1417 | S26H | UNITED KINGDOM | SOUTH UIST | | B | C | | | | | | | | 82 | WILLIAMS, E. R. |
| 01/09/70 | 1443 | UCL 03 | UNITED KINGDOM | KIRUNA | | A C | | | | | | | | | 74 | GROVES, G. V.<br>SCOTT, A. F. D.<br>HAMILTON, R. A.<br>ALMOND, R. |
| 01/09/70 | 2020 | M-1CC | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/09/70 | 2200 | M-1CC | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/11/70 | 2000 | M-1CC | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/12/70 | 1353 | S22H | UNITED KINGDOM | SOUTH UIST | | B | C | | | | | | | | 85 | WILLIAMS, E. R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/12/70 | 1439 | UCL C4 | UNITED KINGDOM | KIRUNA | | A<br>C | | | | | | | | | 68 | GROVES, G. V.<br>SCOTT, A. F. D.<br>HAMILTON, R. A.<br>ALMOND, R. |
| 01/14/70 | | NASA 10.323 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 01/14/70 | 0110 | NASA 10.343 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 160 | BEDINGER, J. F. |
| 01/14/70 | 0300 | NASA 14.447 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 197 | BEDINGER, J. F. |
| 01/14/70 | 0405 | UCL C5 | UNITED STATES | FORT CHURCHILL | B | | | | B | | | | | | 259 | MATTHEWS, D. L. |
| 01/14/70 | 0417 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/14/70 | 0441 | AAF-68-029 | CANADA | FORT CHURCHILL | | | C<br>E<br>B | D | | | | A | | | 125 | MCNAMARA, A. G.<br>FORSYTH, P. A.<br>KAVADAS, A. |
| 01/14/70 | 0500 | NASA 14.448 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 204 | BEDINGER, J. F. |
| 01/14/70 | 0717 | NASA 14.449 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 204 | BEDINGER, J. F. |
| 01/14/70 | 0915 | NASA 14.450 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 201 | BEDINGER, J. F. |
| 01/14/70 | 0917 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/14/70 | 1035 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/14/70 | 1135 | NASA 14.451 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 207 | BEDINGER, J. F. |
| 01/14/70 | 1440 | UCL C5 | UNITED KINGDOM | KIRUNA | | A<br>C | | | | | | | | | N/A | GROVES, G. V.<br>SCOTT, A. F. D.<br>HAMILTON, R. A.<br>ALMOND, R. |
| 01/16/70 | 0540 | NASA 18.79 GM | UNITED STATES | FORT CHURCHILL | B | | | D | | | | | | | 210 | OGILVIE, K.<br>SUTER, R. |
| 01/17/70 | 0120 | S-210-03<br>T-069-001 | JAPAN | KAGOSHIMA | | | | | | | F | | | | 119 | MIYAMOTO, S.<br>KITAMURA, T. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/17/70 | 0303 | NASA 18.65 UE | UNITED STATES | FORT CHURCHILL | B | | | | B | | | | | | 252 | MATTHEWS, D. L. |
| 01/18/70 | 2006 | M-100 | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 81 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/18/70 | 2200 | M-100 | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/19/70 | 1501 | UCL C7 | UNITED KINGDOM | KIRUNA | | A C | | | | | | | | | 70 | GROVES, G. V. SCOTT, A. F. D. HAMILTON, R. A. ALMOND, R. |
| 01/19/70 | 2000 | M-100 | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/19/70 | 2200 | M-100 | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 84 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/20/70 | 2049 | M-100 | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/20/70 | 2237 | M-100 | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/21/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/21/70 | 0210 | L -C3H-06 S -CEO-008 | JAPAN | KAGOSHIMA | | | | | | | | A | | | 350 | YABUKI, H. UKIGAYA, F. |
| 01/21/70 | 0210 | L -C3H-06 S -CEC-002 | JAPAN | KAGOSHIMA | | | C A | | | | | | | | 1848 | EJIRI, M. |
| 01/21/70 | 0210 | L -C3H-06 S -CEO-003 | JAPAN | KAGOSHIMA | | | E D C | | | | | | | | 1848 | SUITSU, T. KUBOI, T. |
| 01/21/70 | 0210 | L -C3H-06 | JAPAN | KAGOSHIMA | | | E | | | | | | | | 1848 | OYAMA, K. |
| 01/21/70 | 0210 | L -C3H-06 S -CEO-005 | JAPAN | KAGOSHIMA | | | | X | | | | | | | 1848 | TAKEUCHI, H. IMAI, T. WATANABE, S. |
| 01/21/70 | 0210 | L -C3H-06 | JAPAN | KAGOSHIMA | | | | | | D | | | | | 1848 | OGAWA, T. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/21/70 | 0210 | L-3H-06 | JAPAN | KAGOSHIMA | | | E | | | | | | | | 350 | MORI, H. |
| 01/21/70 | 1500 | UCL 08 | UNITED KINGDOM | KIRUNA | | A<br>C | | | | | | | | | 71 | GROVES, G. V.<br>SCOTT, A. F. D.<br>HAMILTON, R. A.<br>ALMOND, R. |
| 01/21/70 | 2115 | M-100 | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/22/70 | 0500 | MT-135-P-004<br>T-090 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | 1 | 53 | SHIMIZU, I.<br>SAKAI, I. |
| 01/23/70 | 0220 | MT-135-P-005<br>T-091 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 53 | SHIMIZU, I.<br>SAKAI, I. |
| 01/23/70 | 0500 | MT-160-02<br>T-092 | JAPAN | KAGOSHIMA | | A<br>C | | | | | | | | | 75 | SHIMIZU, I.<br>MISAKI, M. |
| 01/23/70 | 1506 | UCL 09 | UNITED KINGDOM | KIRUNA | | A<br>C | | | | | | | | | 71 | GROVES, G. V.<br>SCOTT, A. F. D.<br>HAMILTON, P. A.<br>ALMOND, R. |
| 01/24/70 | 1427 | ESRO S56A/01 | ITALY<br>UNITED KINGDOM | SARDINIA | | | C<br>D | | | E<br>F | | | | | N/A | ZAHRINGER, J.<br>HALL, J. E. |
| 01/25/70 | 0220 | NASA 4.270 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 169 | MORTON, D. C. |
| 01/25/70 | 0500 | K-9M-28<br>S-081-001 | JAPAN | KAGOSHIMA | | | C<br>E<br>B | | | | | | | | 369 | OYAMA, K. |
| 01/25/70 | 0500 | K-9M-28<br>S-081-002 | JAPAN | KAGOSHIMA | | | D<br>C<br>E | | | | | | | | 369 | SUITSU, T.<br>KUBOI, T.<br>UMEHASHI, K. |
| 01/25/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | U | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/26/70 | 1518 | UCL 10 | UNITED KINGDOM | KIRUNA | | A<br>C | | | | | | | | | 73 | GROVES, G. V.<br>SCOTT, A. F. D.<br>HAMILTON, R. A.<br>ALMOND, R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/27/70 | 1020 | K -C9M-29<br>S -C82-001 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 357 | KAMADA, T.<br>YAMAGUCHI, T. |
| 01/27/70 | 1020 | K -C9M-29 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 357 | MATSUMOTO, H. |
| 01/27/70 | 1020 | K -C9M-29 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 357 | KIMURA, I. |
| 01/27/70 | 1020 | K -C9M-29<br>S -C82-005 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 357 | OYA, H.<br>ASO, T.<br>YOKOBORI, N.<br>EJIRI, M. |
| 01/27/70 | 1020 | K -C9M-29<br>S -C82-006 | JAPAN | KAGOSHIMA | | | E<br>C<br>A | | | | | | | | 180 | OYAMA, K. |
| 01/28/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/28/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/28/70 | 1015 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/28/70 | 1518 | UCL 11 | UNITED KINGDOM | KIRUNA | | A<br>C | | | | | | | | | 75 | GROVES, G. V.<br>SCOTT, A. F. D<br>HAMILTON, R. A.<br>ALMOND, R. |
| 01/29/70 | | NASA 10.338 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 01/29/70 | | NASA 10.339 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 01/30/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/30/70 | 1527 | UCL 12 | UNITED KINGDOM | KIRUNA | | A<br>C | | | | | | | | | 78 | GROVES, G. V.<br>SCOTT, A. F. D.<br>HAMILTON, R. A.<br>ALMOND, R. |
| 02/01/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/02/70 | 2307 | BLACK BRANT VA | FED REP OF GERMANY | ANDOYA | X | | X | X | | | | | | | 202 | BERAN, HEINRICH, RAETHJEN, |
| 02/03/70 | | NASA 10.340 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 02/03/70 | | NASA 10.341 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | SMITH, W. S. |
| 02/03/70 | | NASA 18.113 IE | UNITED STATES NORWAY | ANDOYA | X | | | | | | | | | | N/A | UNKNOWN |
| 02/03/70 | 2225 | NIKE TOMAHAWK | NORWAY UNITED STATES | ANDOYA | X | | X | X | | | | | | | 283 | EVANS, D. FOLKESTAD, K. MAEHLUM, B. SKOVLI, G. |
| 02/04/70 | | NASA 14.441 UI | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | N/A | SCHMERLING, E. R. |
| 02/04/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/04/70 | 0526 | ESROC57/001 | UNITED KINGDOM SWEDEN | KIRUNA | | Z | | | | | | | | | N/A | SCOTT, A. F. D. |
| 02/04/70 | 0619 | NASA 18.100 UA | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 310 | MURCRAY, W. B. |
| 02/04/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/04/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/04/70 | 2001 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/04/70 | 2201 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/05/70 | | NASA 13.13 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A | N/A | MEDROW, K. R. |
| 02/05/70 | 0221 | NASA 18.101 UA | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 340 | MURCRAY, W. B. |
| 02/05/70 | 1005 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/05/70 | 2045 | M-1CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 83 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/06/70 | 0123 | M-1CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/06/70 | 0919 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/06/70 | 1942 | ESRO S44/001 | FED REP OF GERMANY | SARDINIA | | | | | | | E | | | | 211 | HESSBERG, N. |
| 02/06/70 | 2200 | M-1CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/07/70 | | NASA 4.262 CG | UNITED STATES | WHITE SANDS | | | | | | F | | | | | N/A | ROMANS, J. B. |
| 02/07/70 | 0531 | AT 03.726 | UNITED STATES | WHITE SANDS | | F | | | | | B | | | | 142 | WALKER, R. G. CUNIFF, C. |
| 02/07/70 | 2050 | M-1CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/07/70 | 2232 | M-1CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/08/70 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/10/70 | | NASA 14.442 GI | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | N/A | SCHMERLING, E. R. |
| 02/10/70 | 0525 | NASA 18.16 UE | UNITED STATES | FORT CHURCHILL | | | B | D | | | | | | A | N/A | DAVIS, T. N. |
| 02/10/70 | 0630 | S-160-JA-1 | JAPAN | DUMONT D'URVILLE | | F | | | | | | | | | 70 | HIRASAWA, T. TOHMATSU, T. NAGATA, T. KAWAGUCHI, S. |
| 02/10/70 | 1410 | S72 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | | | | | E | | | | 244 | BOKSENBERG, A. |
| 02/11/70 | 0210 | M-1CC | USSR | MOLODEZHNAYA | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/11/70 | 0441 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/11/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/11/70 | 1010 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/12/70 | 0314 | MP-12 | USSR<br>FRANCE | KHEISA ISLAND | | J | | | | | | | | | 165 | INST OF EXPERIMENTAL METEOROLOGY<br>NATIONAL CENTER FOR SCIENTIFIC RES |
| 02/12/70 | 2240 | MP-12 | USSR | KHEISA ISLAND | | B<br>G | C<br>D | | | | | | | | 171 | INST OF EXPERIMENTAL METEOROLOGY |
| 02/14/70 | 0326 | BLACK BRANT VA | FED REP OF GERMANY | ANDOYA | X | | X | X | | | | | | | 210 | BERAN,<br>HEINRICH,<br>LANDENSPERGER, |
| 02/14/70 | 0502 | BLACK BRANT VA | FED REP OF GERMANY | ANDOYA | X | | X | X | | | | | | | 223 | BERAN,<br>HEINRICH,<br>LANDSPERGER, |
| 02/14/70 | 0530 | NASA 13.01 UG | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 231 | NOVICK,R. |
| 02/14/70 | 0910 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/14/70 | 1616 | ESROS66/001 | UNITED KINGDOM<br>SWEDEN<br>NETHERLANDS<br>FED REP OF GERMANY | KIRUNA | | V | E | | B | | | | | | 210 | WRENN,G.L.<br>FALTHAMMAR,K.G.<br>PEDERSEN,A.<br>HAERENDEL,G.<br>SCHUMANN,G. |
| 02/16/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/17/70 | 2043 | M-100 | USSR | 50D 00'S 065D 00'E | | J | | | | | | | | | 83 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/17/70 | 2245 | M-100 | USSR | 50D 00'S 065D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/18/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/18/70 | 0734 | NASA 8.55 UE | UNITED STATES | FORT CHURCHILL | | | | X | | | | | | | 494 | ANDERSON,K.A.<br>MOZER,F. |
| 02/18/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/18/70 | 0906 | S13T/C | UNITED KINGDOM<br>INDIA | THUMBA | | | C | A | | | | | | | 92 | WILLMORE,A.F.<br>HAWKINS,F.J. |
| 02/18/70 | 2017 | M-100 | USSR | 50D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/18/70 | 2218 | M-100 | USSR | 50D 00'S 065D 00'E | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/19/70 | | NASA 14.381 GE | UNITED STATES | FORT CHURCHILL | | | | X | | | | | | | N/A | EVANS,D.S. |
| 02/21/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/21/70 | 1235 | P05SH | UNITED KINGDOM | SOUTH UIST | | | C<br>E | | | | | | | | 148 | GOODALL,C.V. |
| 02/23/70 | 1320 | MP-12 | USSR<br>FRANCE | KHEISA ISLAND | | J | | | | | | | | | 163 | INST OF EXPERIMENTAL METEOROLOGY<br>NATIONAL CENTER FOR SCIENTIFIC RES |
| 02/23/70 | 1650 | ESROC37/001 | FED REP OF GERMANY | KIRUNA | | V | C | | | | | | | | 210 | RIEGER,E.<br>MELZNER,F. |
| 02/24/70 | | NASA 15.72 UI | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | N/A | SCHMERLING,E.R. |
| 02/24/70 | 0719 | AAD-4 -023 | CANADA<br>UNITED STATES | FORT CHURCHILL | | | A | D | | | | | | | N/A | WHALEN,B.A.<br>BARRINGTON,R.E.<br>BUDZINSKI,E.E. |
| 02/24/70 | 1910 | ESROS70/001 | DENMARK<br>UNITED KINGDOM<br>SWEDEN | KIRUNA, | | | A<br>C | | A | | | | | | 185 | UNGSTRUP,E.<br>BURROWS,K.<br>SAYERS,J. |
| 02/25/70 | 0210 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/25/70 | 1230 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/25/70 | 1633 | ESROS61/001 | UNITED KINGDOM<br>FED REP OF GERMANY<br>SWEDEN | KIRUNA | | G | D | | | | | | | | 220 | MILLER,D.E.<br>VON ZAHN,U.<br>EBERHARDT,P. |
| 02/26/70 | 0447 | ESRO6L1/002 | UNITED KINGDOM<br>FED REP OF GERMANY<br>SWEDEN | KIRUNA | | G | D | | | | | | | | 225 | MILLER,D.E.<br>VON ZAHN,U.<br>EBERHARDT,P. |
| 02/26/70 | 0900 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 02/26/70 | 1330 | MP-12 | USSR | KHEISA ISLAND | | V | | | | | | | | | N/A | INST OF EXPERIMENTAL METEOROLOGY |
| 02/26/70 | 1415 | MP-12 | USSR | KHEISA ISLAND | | B<br>G | C<br>D | | | | | | | | 181 | INST OF EXPERIMENTAL METEOROLOGY |
| 02/28/70 | | NASA 14.382 GE | UNITED STATES | FORT CHURCHILL | X | | | X | | | | | | | N/A | EVANS,D.S. |
| 02/28/70 | 1351 | MP-12 | USSR | KHEISA ISLAND | | J | | | | | | | | | 166 | INST OF EXPERIMENTAL METEOROLOGY |
| 02/28/70 | 1436 | MP-12 | USSR | KHEISA ISLAND | | B<br>G | C<br>D | | | | | | | | 182 | INST OF EXPERIMENTAL METEOROLOGY |
| 02/28/70 | 1510 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/01/70 | | NASA 15.73 UI | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | N/A | SCHMERLING,E.R. |
| 03/01/70 | 0400 | NB 3.237 | UNITED STATES | WHITE SANDS | | | | | | | D<br>F | | | | 210 | HENRY,R.C.<br>MEEKINS,J.F.<br>FRITZ,G.G. |
| 03/02/70 | 0025 | MP-12 | USSR<br>FRANCE | KHEISA ISLAND | | J | | | | | | | | | N/A | INST OF EXPERIMENTAL METEOROLOGY<br>NATIONAL CENTER FOR SCIENTIFIC RES |
| 03/02/70 | 0140 | MP-12 | USSR | KHEISA ISLAND | | B<br>G | C<br>D | | | | | | | | 179 | INST OF EXPERIMENTAL METEOROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/02/70 | 0430 | NASA 18.87 GE | UNITED STATES | BARTER ISLAND | | V | | | B | | | | | | N/A | HEPPNER, J. P. |
| 03/02/70 | 0430 | NASA 18.90 GE | UNITED STATES | ALAS. ROCKET RANGE | | V | | | B | | | | | | N/A | HEPPNER, J. P. |
| 03/02/70 | 1437 | MP-12 | USSR FRANCE | KHEISA ISLAND | | J | | | | | | | | | N/A | INST OF EXPERIMENTAL METEOROLOGY NATIONAL CENTER FOR SCIENTIFIC RES |
| 03/03/70 | 1453 | NASA 18.108 GE | UNITED STATES | ALAS. ROCKET RANGE | | V | | | B | | | | | | N/A | HEPPNER, J. P. |
| 03/04/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/04/70 | 1430 | NASA 18.88 GE | UNITED STATES | BARTER ISLAND | | V | | | B | | | | | | N/A | HEPPNER, J. P. |
| 03/04/70 | 1441 | NASA 18.109 GE | UNITED STATES | ALAS. ROCKET RANGE | | V | | | B | | | | | | N/A | HEPPNER, J. P. |
| 03/05/70 | 1030 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/05/70 | 1410 | NASA 18.89 GE | UNITED STATES | BARTER ISLAND | | V | | | B | | | | | | N/A | HEPPNER, J. P. |
| 03/05/70 | 2350 | MP-12 | USSR FRANCE | KHEISA ISLAND | | J | | | | | | | | | 162 | INST OF EXPERIMENTAL METEOROLOGY NATIONAL CENTER FOR SCIENTIFIC RES |
| 03/06/70 | | NASA 10.344 GM | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | | N/A | HILSENRATH, E. |
| 03/06/70 | | NASA 14.426 GM | UNITED STATES | WALLOPS ISLAND | | B C | | | | | | | | | N/A | HORVATH, J. J. |
| 03/06/70 | | NASA 15.66 NM | UNITED STATES | WALLOPS ISLAND | | J | | | | | | | | | N/A | HENRY, R. C. |
| 03/06/70 | 0213 | BLACK BRANT VA | FED REP OF GERMANY | ANDOYA | X | | X | X | | | | | | | 217 | BERAN, BOHM, HEINRICH, |
| 03/06/70 | 1836 | NASA 14.456 CI | UNITED STATES | WALLOPS ISLAND | | | B C | | | F | | | | | N/A | ACCARDO, C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/06/70 | 2335 | MP-12 | USSR FRANCE | KHEISA ISLAND | | J | | | | | | | | | N/A | INST OF EXPERIMENTAL METEOROLOGY NATIONAL CENTER FOR SCIENTIFIC RES |
| 03/07/70 | | NASA 13.03 DS | UNITED STATES | WALLOPS ISLAND | | | | | | X | | | | | N/A | BRUECKNER,G. |
| 03/07/70 | | NASA 10.345 GM | UNITED STATES | WALLOPS ISLAND | | G | | | | | | | | | N/A | HILSENRATH,E. |
| 03/07/70 | | NASA 14.427 UM | UNITED STATES | WALLOPS ISLAND | | B C F | | | | | | | | | N/A | HORVATH,J.J. |
| 03/07/70 | | NASA 14.428 UM | UNITED STATES | WALLOPS ISLAND | | B C F | | | | | | | | | N/A | HORVATH,J.J. |
| 03/07/70 | | NASA 14.429 UM | UNITED STATES | WALLOPS ISLAND | | B C F | | | | | | | | | N/A | HORVATH,J.J. |
| 03/07/70 | | NASA 15.68 NM | UNITED STATES | WALLOPS ISLAND | | J | | | | | | | | | N/A | HENRY,P.C. |
| 03/07/70 | | NASA 15.69 NM | UNITED STATES | WALLOPS ISLAND | | J | | | | | | | | | N/A | HENRY,P.C. |
| 03/07/70 | | NASA 15.70 NM | UNITED STATES | WALLOPS ISLAND | | J | | | | | | | | | N/A | HENRY,P.C. |
| 03/07/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/07/70 | 1450 | MP-12 | USSR | KHEISA ISLAND | | V | | | | | | | | | 161 | INST OF EXPERIMENTAL METEOROLOGY |
| 03/07/70 | 1545 | NASA 14.435 UI | UNITED STATES | WALLOPS ISLAND | | | F | | | | | | | | 188 | MECHTLY,E.A. SMITH,L.G. |
| 03/07/70 | 1551 | AO 07.015-01 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 105 | WEEKS,L.H. FAIRE,A.C. |
| 03/07/70 | 1740 | AAF-3A-042 | CANADA | EAST QUODDY | | | C | | | F E | | | | | 152 | MCNAMARA,A.G. BELROSE,J.S. HALL,J.E. |
| 03/07/70 | 1800 | NASA 19.104 GA | UNITED STATES | WALLOPS ISLAND | | G B | C D | | | | | | | | 286 | BRACE,L.H. CARIGNAN,G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/07/70 | 1809 | AO 07.024-01 | UNITED STATES | EGLIN AFB | | | | | | F | | | | | 97 | WEEKS,L.H.<br>FAIRE,A.C. |
| 03/07/70 | 1810 | AO 07.016-01 | UNITED STATES | EGLIN AFB | | V<br>Y | | | | | | | | | 69 | WEEKS,L.H.<br>FAIRE,A.C. |
| 03/07/70 | 1827 | NASA 18.105 GA | UNITED STATES | WALLOPS ISLAND | | B<br>G | L<br>D | | | | | | | | N/A | BRACE,L.H.<br>CARIGNAN,G. |
| 03/07/70 | 1835 | NE 4.238 | UNITED STATES | WALLOPS ISLAND | | | | | | D | | | | | 165 | BRUECKNER,G. |
| 03/07/70 | 1836 | NASA 4.317 LS | UNITED STATES | WALLOPS ISLAND | | | | | | X | | | | | N/A | REEVES,<br>SPEER, |
| 03/07/70 | 1836 | NASA 14.457 CI | UNITED STATES | WALLOPS ISLAND | | | B<br>C | | | F | | | | | N/A | ACCARDO,C. |
| 03/07/70 | 1837 | NASA 14.436 UI | UNITED STATES | WALLOPS ISLAND | | | F | | | | | | | | 178 | MECHTLY,E.A.<br>SMITH,L.G. |
| 03/07/70 | 1838 | NASA 14.437 UI | UNITED STATES | WALLOPS ISLAND | | | F | | | | | | | | 175 | MECHTLY,E.A.<br>SMITH,L.G. |
| 03/07/70 | 1840 | NASA 14.438 UI | UNITED STATES | WALLOPS ISLAND | | | F | | | | | | | | 192 | MECHTLY,E.A.<br>SMITH,L.G. |
| 03/07/70 | 1840 | NASA 10.346 GM | UNITED STATES | WALLOPS ISLAND | | C | | | | | | | | | 68 | HILSENRATH,E. |
| 03/07/70 | 1847 | NASA 8.57 CE | UNITED STATES | WALLOPS ISLAND | | A | | | | | | | | | 829 | WAX,R.L. |
| 03/07/70 | 1855 | AAF-3A-043 | CANADA | EAST QUODDY | | | C | | | F<br>E | | | | | 156 | MCNAMARA,A.G.<br>BELROSE,J.S.<br>HALL,J.E. |
| 03/07/70 | 1857 | AAF-3A-044 | CANADA | EAST QUODDY | | | C | | | F<br>E | | | | | 156 | MCNAMARA,A.G.<br>BELROSE,J.S.<br>HALL,J.E. |
| 03/07/70 | 1903 | AAF-3A-045 | CANADA | EAST QUODDY | | | C | | | F<br>E | | | | | 156 | MCNAMARA,A.G.<br>BELROSE,J.S.<br>HALL,J.E. |
| 03/07/70 | 1925 | AO 07.016-02 | UNITED STATES | EGLIN AFB | | Y | | | | | | | | | 152 | WEEKS,L.H.<br>FAIRE,A.C. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/07/70 | 1930 | NE 3.235<br>NASA 4.275 D | UNITED STATES | WHITE SANDS | | | | | | | F<br>C | | | | 163 | KOOMEN, M. J.<br>PURCELL, J. D. |
| 03/07/70 | 1937 | AO C7.902-09 | UNITED STATES | WALLOPS ISLAND | | F<br>V | | | | | | | | | 76 | NARCISI, R. S. |
| 03/07/70 | 1939 | AO C7.902-08 | UNITED STATES | WALLOPS ISLAND | | F<br>V | | | | | | | | | 76 | NARCISI, R. S. |
| 03/07/70 | 1944 | AO 07.024-02 | UNITED STATES | EGLIN AFB | | | | | | F | | | | | 99 | WEEKS, L. H.<br>FAIRE, A. C. |
| 03/07/70 | 1946 | AO C7.902-10 | UNITED STATES | WALLOPS ISLAND | | F<br>V | | | | | | | | | 74 | NARCISI, R. S. |
| 03/08/70 | | NASA 14.430 UM | UNITED STATES | WALLOPS ISLAND | | B<br>C<br>F | | | | | | | | | N/A | HORVATH, J. J. |
| 03/08/70 | | NASA 15.78 NM | UNITED STATES | WALLOPS ISLAND | | J | | | | | | | | | N/A | HENRY, R. C. |
| 03/08/70 | 0018 | NIKE-TOMAHAWK | NORWAY<br>AUSTRIA<br>FED REP OF GERMANY<br>SWEDEN | ANDOYA | X | | X | X | | | | | | | 215 | ARMSTRONG, R.<br>BAHNSEN, C. |
| 03/08/70 | 0203 | BLACK BRANT VA | FED REP OF GERMANY | ANDOYA | X | | X | X | | | | | | | 161 | BERAN,<br>BOHM,<br>HEINRICH, |
| 03/09/70 | | NASA 18.99 GI | UNITED STATES | THUMBA | | | X | | | | | | | | N/A | AIKIN, A. C.<br>GOLDBERG, |
| 03/09/70 | 0314 | AT C8.298 | UNITED STATES | FORT CHURCHILL | | | B | | A | | | | | | 298 | VANCOUR, R. P. |
| 03/09/70 | 0321 | AO C7.907-02 | UNITED STATES | FORT CHURCHILL | | | B<br>C<br>E | | | | | | | | 158 | WILDMAN, P. J. L. |
| 03/09/70 | 1430 | NASA 18.97 GI | UNITED STATES | THUMBA | C | | C | | | | | | | | N/A | AIKIN, A. C.<br>GOLDBERG, R. A. |
| 03/09/70 | 2000 | NASA 18.98 GI | UNITED STATES | THUMBA | C | | C | | | | | | | | 295 | AIKIN, A. C.<br>GOLDBERG, R. A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/10/70 | 2034 | M-100 | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/10/70 | 2242 | M-100 | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/11/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/11/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/11/70 | 1954 | M-100 | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/11/70 | 2144 | M-100 | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/12/70 | 2025 | M-100 | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/13/70 | 2134 | M-100 | USSR | 00D 00' 065D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/14/70 | | NASA 4.328 DG | UNITED STATES | WHITE SANDS | | | | | | | X | | | | N/A | ROMANS, J. B. |
| 03/14/70 | 0334 | NB 3.224 | UNITED STATES | WHITE SANDS | | | | | | | E | | | | 164 | CARRUTHERS, G. R. |
| 03/15/70 | 1335 | BLACK BRANT IV | NORWAY FED REP OF GERMANY | ANDOYA | | | X | X | | | | | | | 650 | FOLKESTAD, K. KRANKOWSKY, D. |
| 03/18/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | N/A | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/18/70 | 0245 | BLACK BRANT IV | NORWAY FED REP OF GERMANY | ANDOYA | | | X | X | | | | | | | 665 | FOLKESTAD, K. KRANKOWSKY, D. |
| 03/18/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/18/70 | 2200 | SL-SC1 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | | | | | F | | | | 208 | COOKE, B. A. |
| 03/19/70 | 0319 | NASA 14.425 GI | UNITED STATES | THUMBA | | | D C | | | | | | | | N/A | AIKIN, A. C. GOLDBERG, R. A. |

| DATE (UT) | TIME (UT.) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/19/70 | 0405 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 84 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/19/70 | 0509 | NASA 14.424 GI | UNITED STATES | THUMBA | | | C D | | | | | | | | N/A | AIKIN,A.C. GOLDBERG,R.A. |
| 03/19/70 | 1001 | NASA 14.372 GI | UNITED STATES | THUMBA | | | C D | | | | | | | | N/A | AIKIN,A.C. WELKER,J.E. SOMAYAJULU,Y.V. |
| 03/19/70 | 1518 | SL-401 | UNITED KINGDOM | WOOMERA | | | | | | | D | | | A | 181 | BUTLER,H.E. HUMPHRIES,C.M. |
| 03/20/70 | 2350 | NASA 10.277 NA | UNITED STATES | WHITE SANDS | C | G | D | | | | | | | | 56 | POTTER,A.E. |
| 03/21/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/23/70 | 2258 | NIKE CAJUN | NORWAY AUSTRIA FED REP OF GERMANY | ANDOYA | X | | X | X | | | | | | | 103 | FOLKESTAD,K. RIEDLER,W. SKOVLI,G. |
| 03/24/70 | 1923 | M-100 | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/24/70 | 2132 | M-100 | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/25/70 | 0101 | AD 07.907-03 | UNITED STATES | FORT CHURCHILL | B | | C E | | | | | | | | 169 | SMIDDY,M. MAHON,H. |
| 03/25/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/25/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/25/70 | 2059 | M-100 | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/26/70 | 0320 | AD 07.907-04 | UNITED STATES | FORT CHURCHILL | B | | C E | | | | | | | | 101 | SMIDDY,M. MAHON,H. |
| 03/26/70 | 0444 | NASA 4.309 UA | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 164 | FASTIE,W.G. ZIPH,E. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/26/70 | 0445 | NASA 18.82 UA | UNITED STATES | FORT CHURCHILL | B | | | | | | | | | | 236 | BARTH,C.A. SHARP,W. |
| 03/26/70 | 2032 | M-1CC | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/26/70 | 2120 | M-1CC | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/27/70 | | NASA 14.405 IE -II | UNITED STATES INDIA | THUMBA | | | X | | X | | | | | | N/A | UNKNOWN |
| 03/27/70 | 0700 | NASA 15.54 GI | UNITED STATES | THUMBA | | | C | | | | | | | | N/A | KANE,J.A. |
| 03/27/70 | 1242 | NASA 15.63 GI | UNITED STATES | THUMBA | | | C | | | | | | | | N/A | KANE,J.A. |
| 03/27/70 | 1306 | NASA 15.64 GI | UNITED STATES | THUMBA | | | C | | | | | | | | N/A | KANE,J.A. |
| 03/27/70 | 1330 | NASA 15.65 GI | UNITED STATES | THUMBA | | | C | | | | | | | | N/A | KANE,J.A. |
| 03/27/70 | 1550 | REHBAR-21 | PAKISTAN | SONMIANI | | Z | | | | | | | | | 141 | RAHMATULLAH,M. WITT,W.R. SCOTT,A.F.D. |
| 03/28/70 | 1545 | REHBAR-22 | PAKISTAN | SONMIANI | | Z | | | | | | | | | 141 | RAHMATULLAH,M. WITT,W.R. SCOTT,A.F.D. |
| 03/29/70 | 1953 | M-1CC | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/29/70 | 2137 | M-1CC | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 03/30/70 | 1956 | M-1CC | USSR | 20D 00'S 065D 00'E | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/01/70 | 0200 | M-1CC | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/01/70 | 0501 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/01/70 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/02/70 | 0146 | ESRO S66/002 | UNITED KINGDOM<br>SWEDEN<br>NETHERLANDS<br>FED REP OF GERMANY | KIRUNA | | V | E | | B | | | | | | 198 | WRENN,G.L.<br>FALTHAMMAR,K.G.<br>PEDERSEN,A.<br>HAERENDEL,G.<br>SCHUMANN,G. |
| 04/03/70 | 0122 | ESRO C57/002 | UNITED KINGDOM<br>SWEDEN | KIRUNA | | Z | | | | | | | | | 173 | SCOTT,A.F.D. |
| 04/03/70 | 0459 | NASA 8.56 UE | UNITED STATES | FORT CHURCHILL | | | | X | | | | | | | 557 | ANDERSON,K.A.<br>MOZER,F. |
| 04/04/70 | 0900 | M-1 CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 04/04/70 | 1912 | ESRO S28/001 | FED REP OF GERMANY<br>UNITED KINGDOM | KIRUNA | | V | C<br>E | | | | | | | | 203 | HAERENDEL,G.<br>BYRNE,F.N.<br>SAYERS,J. |
| 04/06/70 | 1954 | M-1 CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 95 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 04/06/70 | 2145 | M-1 CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 88 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 04/07/70 | 0320 | SL-EC3 | UNITED KINGDOM<br>AUSTRALIA | WOOMERA | | | | | | D<br>E | | | | | 204 | ENGSTROM,F.<br>SHENTON,D.B. |
| 04/07/70 | 1931 | M-1 CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 04/08/70 | 0900 | M-1 CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 04/08/70 | 1940 | M-1 CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 04/08/70 | 2130 | M-1 CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 04/09/70 | 1949 | M-1 CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 04/09/70 | 2110 | M-1 CC | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 95 | CENTRAL AEROLOG-ICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/10/70 | 1931 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/11/70 | | NASA 18.91 UE | UNITED STATES | FORT CHURCHILL | X | | | | | | | | | | N/A | OPP.A.G. |
| 04/11/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/11/70 | 1306 | S28F | UNITED KINGDOM | SOUTH UIST | | C B | C | | | | | | | A | N/A | WILLIAMS,E.R. |
| 04/11/70 | 1606 | S27F | UNITED KINGDOM | SOUTH UIST | | B C | C | | | | | | | A | N/A | WILLIAMS,E.R. |
| 04/13/70 | | NASA 4.321 UA | UNITED STATES | WHITE SANDS | X | | | | | | | | | | N/A | DUBIN,M. |
| 04/13/70 | 2000 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/14/70 | 0915 | S16F | UNITED KINGDOM | SOUTH UIST | | | C | A | | | | | | | 92 | WILLMORE,A.F. NORMAN,K. SHIRKE,J.S. |
| 04/14/70 | 1233 | S17F | UNITED KINGDOM | SOUTH UIST | | | C | A | | | | | | | 92 | WILLMORE,A.F. N.K. SHIRKE,J.S. |
| 04/14/70 | 1530 | NASA 17.05 GT | UNITED STATES | WHITE SANDS | | | | | | F | F | | | | 88 | LANE,J.H. |
| 04/14/70 | 2000 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/15/70 | 0205 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/15/70 | 0911 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/15/70 | 1925 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/15/70 | 2126 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/16/70 | | NASA 15.74 UI | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | N/A | SCHMERLING,E.R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/16/70 | | NASA 14.443 UI | UNITED STATES | FORT CHURCHILL | | | X | | | | | | | | N/A | SCHMERLING,E.R. |
| 04/16/70 | 0150 | S147/C | UNITED KINGDOM INDIA | THUMBA | | | C | A | | | | | | | 91 | WILLMORE,A.F. NORMAN,K. SHIRKE,J.S. |
| 04/16/70 | 0706 | MP-12 | USSR | VOLGOGRAD | | B F | | | | | | | | | 170 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/16/70 | 0730 | MP-12 | USSR | KHEISA ISLAND | | B F | | | | | | | | | 175 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/16/70 | 0802 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/16/70 | 0837 | SL-728 | UNITED KINGDOM AUSTRALIA | WOOMERA | | G | | | | | F | | | | 210 | HARRIES,J. STEWART,K.H. |
| 04/16/70 | 1102 | MP-12 | USSR | KAPUSTIN YAR | | B F | | | | | | | | | 170 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/16/70 | 1950 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/16/70 | 2128 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/17/70 | 1306 | S18H | UNITED KINGDOM | SOUTH UIST | | | C | A | | | | | | | 95 | WILLMORE,A.F. N,K. SHIRKE,J.S. |
| 04/17/70 | 1940 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/17/70 | 2127 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/18/70 | 1917 | M-100 | USSR | 40D 00'S 065D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/21/70 | 2141 | P036H | UNITED KINGDOM | SOUTH UIST | | | | C | | | | | | | 139 | ROTHWELL,P. PROCA,G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/22/70 | 0811 | AEF-2 -121 | CANADA | FORT CHURCHILL | | G C | E C A | | | | | | | | 75 | DELEEUW, J.H. HAASZ, A. CHIN, P. |
| 04/22/70 | 1050 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/23/70 | 0700 | MP-12 | USSR | KHEISA ISLAND | | B F | | | | | | | | | 175 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/23/70 | 0732 | MP-12 | USSR | KAPUSTIN YAR | | B F | | | | | | | | | 170 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/23/70 | 1101 | MP-12 | USSR | KAPUSTIN YAR | | B F | | | | | | | | | 170 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/24/70 | 0052 | AMD-S2-025 | CANADA | FORT CHURCHILL | B | | D E | | | | | | | | 288 | SHEPHERD, G.G. CLOUTIER, G.G. MCNAMARA, A.G. |
| 04/24/70 | 0730 | MP-12 | USSR | KAPUSTIN YAR | | | D | | | | | | | | 175 | INST OF EXPERIMENTAL METEOROLOGY |
| 04/27/70 | 0501 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 04/29/70 | 0205 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 05/03/70 | 1245 | ORION II | ARGENTINA | MAR DEL PLATA | | | | A | A | | | | | | 90 | SANTOCHI, O. MANZANO, J.R. SIVERMAN, M. |
| 05/06/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 05/06/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 05/06/70 | 2226 | D-001 | ARGENTINA | MAR DEL PLATA | | | | C | A | C | | | | A | 430 | SANTOCHI, O. MANZANO, J.R. IGLESIAS, G. |
| 05/08/70 | 0104 | AH 07.677 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 159 | ROSENBERG, N.W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/08/70 | 0144 | AO 07.901-02 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 153 | ROSENBERG,N.W. |
| 05/08/70 | 0915 | NASA 13.06 UG | UNITED STATES | WHITE SANDS | | | | | | F | | | | | 146 | BRADT,H.V. |
| 05/11/70 | | NASA 4.322 UA | UNITED STATES | FORT CHURCHILL | | G | | | | | | | | | N/A | DUBIN,M. |
| 05/13/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 05/14/70 | | NASA 15.57 GM | UNITED STATES | VANDENBURG AFB | | J | | | | | | | | | N/A | KRUEGER,A.J. |
| 05/14/70 | 0901 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 90 | CENTRAL AEROLOG-ICAL OBSERVATORY. |
| 05/20/70 | 0150 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 96 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 05/20/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 05/21/70 | 0201 | AO 07.901-04 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 120 | ROSENBERG,N.W. |
| 05/21/70 | 0731 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 84 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 05/21/70 | 0901 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 90 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 05/21/70 | 1031 | AO 07.901-03 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 153 | ROSENBERG,N.W. |
| 05/21/70 | 1206 | AO 07.901-01 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 159 | ROSENBERG,N.W. |
| 05/22/70 | 1112 | AO 07.901-05 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 140 | ROSENBERG,N.W. |
| 05/27/70 | 0205 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 97 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 05/27/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 94 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 05/29/70 | | NASA 4.301 UG | UNITED STATES | WOOMERA | | | | | | | E | | | | N/A | ROMANS,J.B. |
| 06/02/70 | | NASA 4.311 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | N/A | DUBIN,M. |
| 06/02/70 | | NASA 4.302 UG | UNITED STATES | WOOMERA | | | | | | | F | | | | N/A | DUBIN,M. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/02/70 | | NASA 4.271 UG | UNITED STATES | WHITE SANDS | | | | | | | X | | | | N/A | ROMANS, J.B. |
| 06/04/70 | 1001 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/07/70 | 0726 | ESROC48/001 | NETHERLANDS<br>UNITED KINGDOM<br>SWEDEN | KIRUNA | | | | | | E<br>F | | | | | 152 | DE JAGER, C.<br>BOWLES, J.A. |
| 06/10/70 | 0210 | M-1CC | USSR | MOLODEZHNAYA | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/10/70 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/12/70 | 0359 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/17/70 | 0200 | M-1CC | USSR | MOLODEZHNAYA | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/17/70 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/17/70 | 1450 | SUPARCO 62/70 | PAKISTAN | SONMIANI | | A | | | | | | | | | 64 | RAHMATULLAH, M.<br>JAFRI, S.A. |
| 06/17/70 | 2300 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/18/70 | 1537 | NASA 10.342 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | N/A | SMITH, W.S. |
| 06/18/70 | 2000 | M-1CC | USSR | 09D 00'S 065D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/18/70 | 2126 | NASA 15.79 GM | UNITED STATES | VANDENBURG AFB | | J | | | | | | | | | N/A | KRUEGER, A.J. |
| 06/20/70 | 2000 | M-1CC | USSR | 15D 00'S 065D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/21/70 | 2100 | M-1CC | USSR | 19D 00'S 065D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 06/22/70 | 1404 | ESROS68/002 | ITALY | SARDINIA | | | | A | | | | | | | 3 | BRINI, D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06/22/70 | 1445 | NASA 4.323 US | UNITED STATES | WHITE SANDS | | | | | | X | | | | | N/A | JEFFRIES.W.<br>EFFRIES.J.T. |
| 06/22/70 | 1600 | NASA 10.332 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 132 | WRIGHT.D.U. |
| 06/24/70 | 0905 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 06/24/70 | 1509 | S23H | UNITED KINGDOM | SOUTH UIST | | B | A<br>C | | | | | | | | N/A | WILLIAMS.E.R. |
| 06/26/70 | 1820 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 145 | INST OF EXPERI-MENTAL METEOROLOGY |
| 06/27/70 | 0455 | NASA 13.12 UG | UNITED STATES | WHITE SANDS | | | | | | | F | | | | 175 | GURSKY.H.<br>GORENSTEIN.P. |
| 06/27/70 | 1727 | PC39H | UNITED KINGDOM | SOUTH UIST | | | C | | | | | | | | 126 | BULLOUGH.K. |
| 07/01/70 | 0205 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 95 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/01/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/01/70 | 1506 | S29H | UNITED KINGDOM | SOUTH UIST | | C<br>B | C | | | | | | | | N/A | WILLIAMS.E.R. |
| 07/01/70 | 1805 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 149 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/01/70 | 2010 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 89 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/01/70 | 2200 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/02/70 | 0601 | NASA 4.299 UG | UNITED STATES | WHITE SANDS | | | | | | | D | | | | 168 | CODE.A.D.<br>BLESS.P.C. |
| 07/03/70 | 1650 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 167 | INST OF EXPERI-MENTAL METEOROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/03/70 | 1951 | ESROS63/002 | UNITED KINGDOM ITALY | SARDINIA | | V | C | | A | | | | | | 150 | DORLING,E.B. BURROWS,K. PUJO,A.P. |
| 07/05/70 | 2005 | M-1CC | USSR | 41D 00'S 065D 00'E | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/06/70 | 1747 | MP-12 | USSR | KAPUSTIN YAR | | | C E | | | | | | | | 149 | INST OF EXPERIMENTAL METEOROLOGY |
| 07/06/70 | 1824 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 84 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/06/70 | 2015 | M-1CC | USSR | 41D 00'S 065D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/06/70 | 2200 | MP-12 | USSR | KAPUSTIN YAR | | F G | | | | | | | | | 171 | INST OF EXPERIMENTAL METEOROLOGY |
| 07/06/70 | 2343 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 150 | INST OF EXPERIMENTAL METEOROLOGY |
| 07/07/70 | 0005 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/07/70 | 0148 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 169 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/08/70 | 0005 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/08/70 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/08/70 | 1000 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/08/70 | 1945 | ESROS65/001 | UNITED KINGDOM SPAIN | SARDINIA | | V | C | | A | | | | | | 149 | DORLING,E.B. BURROWS,K. PUJO,A.P. |
| 07/08/70 | 1956 | M-1CC | USSR | 45D 00'S 065D 00'E | | J | | | | | | | | | N/A | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/08/70 | 2348 | MP-12 | USSR | VOLGOGRAD | | V | | | | | | | | | 140 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/09/70 | 1752 | MP-12 | USSR | KAPUSTIN YAR | | V | | | | | | | | | 140 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/10/70 | 0000 | SL-727 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | B C | | | | F | | | | 203 | DORLING,E.B. BURROWS,K. MCCRACKEN,K.G. |
| 07/10/70 | 1830 | M-100 | USSR | 51D 00'S 065D 00'E | | J | | | | | | | | | N/A | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/13/70 | 2000 | M-100 | USSR | 50D 00'S 069D 00'E | | J | | | | | | | | | 86 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/13/70 | 2230 | M-100 | USSR | 50D 00'S 069D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/14/70 | 0452 | SL-571 | UNITED KINGDOM AUSTRALIA | WOOMERA | | | | | | F | | | | | 223 | WILLMORE,A.P. GILMORE,D.J. |
| 07/15/70 | 0720 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/15/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/15/70 | 1400 | SL-611 | UNITED KINGDOM | WOOMERA | | | | | | | D E | | | | 164 | BURTON,W.M. BOKSENBERG,A. |
| 07/15/70 | 1505 | SUPARCO 63/70 | PAKISTAN | SONMIANI | | A | | | | | | | | | 63 | RAHMATULLAH,M. JAFRI,S.A. |
| 07/15/70 | 1800 | M-100 | USSR | 46D 00'S 065D 00'E | | J | | | | | | | | | 95 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/15/70 | 2000 | M-100 | USSR | 46D 00'S 065D 00'E | | J | | | | | | | | | 93 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/16/70 | 1600 | NASA 10.320 UI | UNITED STATES | WALLOPS ISLAND | | | E B | | | | | | | | 143 | MECHTLY,E.A. SMITH,L.G. |
| 07/17/70 | 2024 | M-100 | USSR | 39D 00'S 065D 00'E | | J | | | | | | | | | N/A | CENTRAL AEROLOG-ICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/17/70 | 2222 | M-100 | USSR | 39D 00'S 066D 00'E | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/18/70 | 2015 | M-100 | USSR | 39D 00'S 065D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/18/70 | 2205 | M-100 | USSR | 39D 00'S 065D 00'E | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/20/70 | 2000 | M-100 | USSR | 31D 00'S 065D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/20/70 | 2150 | M-100 | USSR | 31D 00'S 065D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/21/70 | 2000 | M-100 | USSR | 30D 00'S 065D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/22/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/22/70 | 1335 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/22/70 | 2054 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 07/23/70 | 1225 | MP-12 | USSR | 20D 00'N 030D 00'W | | | C | | | | | | | | 167 | INST OF EXPERIMENTAL METEOROLOGY |
| 07/23/70 | 1355 | ESRO S56A/02 | ITALY<br>UNITED KINGDOM | SARDINIA | | | C<br>D | | | E<br>F | | | | | 137 | KRANKOWSKY,D.<br>HALL,J.E. |
| 07/24/70 | 0326 | ESROS65/002 | ITALY<br>FED REP OF GERMANY | SARDINIA | | | C<br>D | | | E | | | | | 125 | KAISER,T.R.<br>HALE,J.E.<br>KRANKOWSKY,D. |
| 07/25/70 | 1403 | MP-12 | USSR | 19D 46'N 030D 33'W | | | C | | | | | | | | 150 | INST OF EXPERIMENTAL METEOROLOGY |
| 07/26/70 | 0435 | AOC4.004-01 | UNITED STATES | WHITE SANDS | | | | | | | B | | | | 143 | UNKNOWN |
| 07/26/70 | 1301 | MP-12 | USSR | 19D 55'N 030D 21'W | | | C | | | | | | | | 158 | INST OF EXPERIMENTAL METEOROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/26/70 | 1720 | MP-12 | USSR | 19D 39'N 029D 50'W | | | C | | | | | | | | 158 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/26/70 | 1949 | MP-12 | USSR | 19D 27'N 030D 14'W | | | C | | | | | | | | 180 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/27/70 | 0416 | ESRO S65/002 | ITALY FED REP OF GERMANY | SARDINIA | | | C D | | | E | | | | | 128 | KAISER, T. R. |
| 07/27/70 | 0437 | NASA 4.259 GG | UNITED STATES | WHITE SANDS | | | | | | | X | | | | N/A | SMITH, W. S. |
| 07/27/70 | 0635 | AO 04.004-01 | UNITED STATES | WHITE SANDS | | | | | | | B | | | | 143 | WALKER, R. W. CUNNIFF, C. |
| 07/29/70 | 0155 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 91 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/29/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 07/30/70 | 0821 | MP-12 | USSR | 00D 14'N 023D 56'W | | | C | | | | | | | | 160 | INST OF EXPERI-MENTAL METEOROLOGY |
| 07/30/70 | 1246 | NASA 18.72 UE | UNITED STATES | WALLOPS ISLAND | | | | X | | | | | | | N/A | LOCK, OOD, J. A. |
| 07/30/70 | 1426 | MP-12 | USSR | 00D 05'N 023D 51'W | | | C | | | | | | | | 159 | INST OF EXPERI-MENTAL METEOROLOGY |
| 08/03/70 | 1609 | NASA 14.466 UM | UNITED STATES | WALLOPS ISLAND | | J | | | | | | | | | N/A | HORVATH, J. J. |
| 08/04/70 | 0431 | MP-12 | USSR | 19D 33'N 030D 23'W | | F G | | | | | | | | | 165 | INST OF EXPERI-MENTAL METEOROLOGY |
| 08/04/70 | 1105 | SPARROW ARCAS | NORWAY | ANDOYA | | | C D | | | | | | | | 85 | JOHANNESSEN, A. |
| 08/04/70 | 1718 | MP-12 | USSR | 20D 38'N 030D 10'W | | F G | | | | | | | | | 158 | INST OF EXPERI-MENTAL METEOROLOGY |
| 08/05/70 | 0220 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 91 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 08/05/70 | 0820 | MP-12 | USSR | 19D 53'N 029D 28'W | | | C | | | | | | | | 149 | INST OF EXPERI-MENTAL METEOROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/05/70 | 1630 | MP-12 | USSR | 21D 07'N 030D 05'W | | D | G | | | | | | | | 149 | INST. OF EXPERI-MENTAL METEOROLOGY |
| 08/05/70 | 1700 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 89 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 08/08/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 08/09/70 | 2340 | ESROC58/002 | FED REP OF GERMANY | KIRUNA | | K | D | | | | | A | | | 114 | KRANKOWSKY,D.<br>FECHTIG,K.<br>RAWER,K.<br>ROSSLER,F.<br>LINDBLAD,B.A. |
| 08/10/70 | 0050 | ESROC51/002 | SWEDEN<br>FRANCE | KIRUNA | | K | | | | | | | | | 154 | WITT,G.<br>ROSSLER,F. |
| 08/10/70 | 0612 | MP-12 | USSR | 38D 18'N 019D 08'W | | | C | | | | | | | | 158 | INST OF EXPERI-MENTAL METEOROLOGY |
| 08/10/70 | 1637 | MP-12 | USSR | 38D 27'N 019D 20'W | | | C | | | | | | | | 150 | INST OF EXPERI-MENTAL METEOROLOGY |
| 08/12/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 08/12/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 08/12/70 | 1902 | AO C4.002-01 | UNITED STATES | WHITE SANDS | | | | | | S | | | | | 246 | HINTEREGGER,H.E.<br>HIGGINS,J.E.<br>CHAGNON,C.W. |
| 08/13/70 | 0602 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 85 | CENTRAL AEROLOG-ICAL OBSERVATORY |
| 08/13/70 | 1802 | NASA 4.200 DS | UNITED STATES | WHITE SANDS | | | | | | X | | | | | N/A | TOUSEY,R. |
| 08/17/70 | 0356 | ADD-58-031 | CANADA | FORT CHURCHILL | | | B<br>C<br>F | | | | | | | | 260 | KAVADAS,A.<br>MCNAMARA,A.G.<br>MCEWEN,D.J.<br>HAERENDEL,I.<br>MOZER,F.S.<br>FAHLESON,U.V. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/19/70 | 0150 | M-1CC | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 08/19/70 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 08/19/70 | 1103 | ESROC4B/002 | NETHERLANDS UNITED KINGDOM SWEDEN | KIRUNA | | | | | | E<br>E | | | | | 163 | DE JAGER,C.<br>BOWLES,J.A. |
| 08/20/70 | 1100 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 08/22/70 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 08/26/70 | 0155 | M-1CC | USSR | MOLODEZHNAYA | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 08/26/70 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 08/27/70 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 08/27/70 | 1002 | M-1CC | USSR | KAPUSTIN YAR | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 08/28/70 | 0443 | NASA 14.414 UG | UNITED STATES | WHITE SANDS | | | | | | | X | | | | N/A | GARMIRE,G. |
| 09/01/70 | 2010 | NASA 8.52 LA | UNITED STATES | WALLOPS ISLAND | | | C | | | | | | | | N/A | DONAHUE,T.M. |
| 09/02/70 | 0900 | M-1CC | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/02/70 | 1014 | K -CE -16 | JAPAN | KAGOSHIMA | | V | E | | | | | | | | 174 | OYAMA,K. |
| 09/02/70 | 1014 | K -CE -16<br>S -CE4-001 | JAPAN | KAGOSHIMA | | V | G | | | | | | | | 174 | KIMURA,H.<br>MATSUOKA,T.<br>OHCHI,N.<br>KATO,S.<br>KURIKI,I. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/02/70 | 1014 | K-CE-16<br>S-CE4 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 174 | KATO,K.<br>EJIRI,M.<br>ASO,T. |
| 09/02/70 | 1335 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/03/70 | 0501 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/08/70 | 0507 | P03CH | UNITED KINGDOM | SOUTH UIST | | | C<br>E | | | F | | | | | 148 | BOWEN,P.J. |
| 09/08/70 | 1901 | P032H | UNITED KINGDOM | SOUTH UIST | | | C<br>E | | | F | | | | | 149 | BOWEN,P.J. |
| 09/09/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/09/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/10/70 | 1002 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/11/70 | 0559 | P031H | UNITED KINGDOM | SOUTH UIST | | | E<br>C | | | F | | | | | N/A | BOWEN,P.J. |
| 09/15/70 | 1000 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/16/70 | 0205 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 98 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/17/70 | 1542 | NASA 10.324 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 127 | THEON,J.S. |
| 09/17/70 | 1558 | NASA 14.385 UM | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | | 156 | HORVATH,J.J.<br>ALLEN,H.<br>FISHBACH,F. |
| 09/18/70 | 1139 | P01CH | UNITED KINGDOM | SOUTH UIST | | C | | | | | | | | | 144 | WILLIAMS,E.R. |
| 09/19/70 | | L-C3H-05<br>S-C05-009 | JAPAN | KAGOSHIMA | | G | | | | | | | | | N/A | NAKAI,S.<br>IZAWA,Y. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/19/70 | 1130 | L -C3H-05 | JAPAN | KAGOSHIMA | D | | | | | | | | | | 2017 | MASUOKA,T. |
| 09/19/70 | 1130 | L -C3H-05<br>S -C6S-006 | JAPAN | KAGOSHIMA | | | | C | | | | | | | 2017 | UENO,M.<br>FUJII,M.<br>HISHIDA,Y.<br>KAJIYAMA,K. |
| 09/19/70 | 1130 | L -C3H-05<br>S -C6S-002 | JAPAN | KAGOSHIMA | | | | | | E | | | | | 2017 | TOHMATSU,T.<br>OGAWA,T.<br>HAYASHI,T.<br>HASHIMOTO,M. |
| 09/19/70 | 1130 | L -C3H-05<br>S -C6S-003 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 2017 | MORI,H. |
| 09/19/70 | 1130 | L -C3H-05 | JAPAN | KAGOSHIMA | | | E | | | | | | | | 2017 | OYAMA,K. |
| 09/19/70 | 1130 | L -C3H-05<br>S -C6S-007 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 2017 | OYA,H.<br>ASO,T. |
| 09/19/70 | 1130 | L -C3H-05<br>S -C6S-011 | JAPAN | KAGOSHIMA | E | | | | | | | | | | 329 | TOHMATSU,T.<br>OGAWA,T.<br>HAYASHI,T. |
| 09/19/70 | 1130 | L -C3H-05<br>S -C6S-013 | JAPAN | KAGOSHIMA | | | | A<br>C | | | | | | | 329 | TAKEUCHI,H.<br>IMAI,T.<br>WATANABE,S.<br>NAKAI,K.<br>KATO,H.<br>IWASAKI,S.<br>YAMASHITA,K. |
| 09/19/70 | 1130 | L -C3H-05<br>S -C6S-012 | JAPAN | KAGOSHIMA | | | | | | | F | | | | N/A | HAYAKAWA,S.<br>KATO,K.<br>KONO,T.<br>YAMASHITA,K. |
| 09/20/70 | 1130 | L -C3H-05<br>S -C6S-008 | JAPAN | KAGOSHIMA | | | | C<br>D | | | | | | | 2017 | TSUKUDA,M.<br>YOSHIMORI,M.<br>MURAKAMI,H.<br>NAKAMOTO,A.<br>DOKE,T. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/21/70 | 1614 | NASA 10.327 UM | UNITED STATES | WALLOPS ISLAND | | C<br>B<br>F | | | | | | | | A | 145 | HORVATH, J. J. |
| 09/23/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/27/70 | 0642 | K -CSM-32<br>S -C86-005 | JAPAN | KAGOSHIMA | | | B<br>A | | | | | | | | 346 | YABUZAKI, T.<br>TSUKADA, N.<br>TSUTSUI, M.<br>KONDO, S. |
| 09/27/70 | 0642 | K -CSM-32 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 346 | OYAMA, K. |
| 09/27/70 | 0642 | K -CSM-32<br>S -C86-003 | JAPAN | KAGOSHIMA | | | C<br>A | | | | | | | | 346 | EJIRI, M.<br>WATANABE, Y.<br>BORGNE, K. |
| 09/27/70 | 0642 | K -CSM-32<br>S -C86-002 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 240 | KAWASHIMA, N.<br>KIFUNE, T. |
| 09/30/70 | 0155 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 97 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/30/70 | 0905 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 09/30/70 | 1910 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/06/70 | 1840 | AFCRL 70-1 | UNITED STATES | CAPE KENNEDY | | | | | | | | | | A | 73 | GRIFFIN, J. R. |
| 10/07/70 | 0150 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/07/70 | 0400 | M-100 | USSR | VOLGOGRAD | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/07/70 | 1600 | AFCRL 70-2 | UNITED STATES | CAPE KENNEDY | | | | | | | | | | A | 72 | GRIFFIN, J. R. |
| 10/08/70 | 0820 | SL-572 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | | | | | | F | | | | 232 | COOKE, B. A. |
| 10/08/70 | 1300 | AFCRL 70-3 | UNITED STATES | CAPE KENNEDY | | | | | | | | | | A | 78 | GRIFFIN, J. R. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/08/70 | 1515 | AFCRL 70-4 | UNITED STATES | CAPE KENNEDY | | | | | | | | | | A | 74 | GRIFFIN, J.R. |
| 10/08/70 | 1623 | AFCRL 70-5 | UNITED STATES | CAPE KENNEDY | | | | | | | | | | A | 75 | GRIFFIN, J.R. |
| 10/10/70 | 1800 | NASA 15.80 GM | UNITED STATES | PRIMROSE LAKE | | | | | | | | | | C | 68 | KRUEGER, A. J. |
| 10/14/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/14/70 | 0403 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/14/70 | 0845 | SL-1021 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | | | | | B<br>F | | | | | 270 | WILLMORE, A.F.<br>CRUISE, A.M. |
| 10/14/70 | 0955 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/14/70 | 1641 | NASA 10.276 AM | UNITED STATES | WALLOPS ISLAND | | G | D | | | | | | | A | 116 | HORVATH, J. J.<br>HENDERSON, H. |
| 10/16/70 | 0030 | ESRO S3/ | NETHERLANDS<br>AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | | | | | F | | | | | 209 | DIJKSTRA, J.H.<br>HOHN, D.H.<br>WILSON, R. |
| 10/17/70 | 1800 | NASA 15.81 GM | UNITED STATES | PRIMROSE LAKE | | | | | | | | | | C | 62 | KRUEGER, A. J. |
| 10/20/70 | 1305 | MP-12 | USSR | KAPUSTIN YAR | | | D | | | | | | | | 150 | INST OF EXPERIMENTAL METEOROLOGY |
| 10/21/70 | 0215 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 97 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/21/70 | 0400 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/21/70 | 0910 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/21/70 | 1325 | MP-12 | USSR | KAPUSTIN YAR | | | B | | | | | | | | 176 | INST OF EXPERIMENTAL METEOROLOGY |
| 10/21/70 | 1503 | MP-12 | USSR | KAPUSTIN YAR | | | D | | | | | | | | 168 | INST OF EXPERIMENTAL METEOROLOGY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/28/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/28/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/28/70 | 1900 | M-100 | USSR | 00D 00' 070D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 10/28/70 | 2034 | ESROS67/001 | UNITED KINGDOM<br>FRANCE<br>SWEDEN<br>BELGIUM | KIRUNA | B | | | D | | | | | | | 229 | BRYANT,D.A.<br>REME,H.<br>HULTQVIST,B.<br>MONFILS,A. |
| 10/29/70 | 2139 | ESROS67/002 | UNITED KINGDOM<br>FRANCE<br>SWEDEN<br>BELGIUM | KIRUNA | B | | | D | | | | | | | 234 | BRYANT,D.A.<br>REME,H.<br>HULTQVIST,B.<br>MONFILS,A. |
| 11/01/70 | 2200 | M-100 | USSR | 02D 00'S 070D 00'E | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/04/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/04/70 | 0401 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/04/70 | 0920 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/06/70 | 1600 | M-100 | USSR | 03D 00'S 129D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/06/70 | 1645 | NASA 15.82 GM | UNITED STATES | FORT SHERMAN | | G | C | | | | | | | | 60 | KRUEGER,A.J. |
| 11/07/70 | 0100 | M-100 | USSR | 00D 00' 070D 00'E | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/11/70 | 0455 | SL-905 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | | C | | | | F | | | | 183 | SANFORD,P.W.<br>NEWTON,A.C.<br>CRUISE,A.M. |
| 11/11/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/12/70 | 0901 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/12/70 | 1230 | P021H | UNITED KINGDOM | SOUTH UIST | | C | | | | | | | | | 85 | WILLIAMS,E.R. |
| 11/13/70 | 1645 | NASA 15.83 GM | UNITED STATES | FORT SHERMAN | | G | | | | | | | | C | 60 | KRUEGER,A.J. |
| 11/13/70 | 2220 | NIKE/TOMAHAWK | NORWAY<br>UNITED STATES<br>AUSTRIA<br>DENMARK | ANDOYA | | Z | | | | | | | | | 214 | KRANKOWSKY,D.<br>EGELAND,A.<br>MAYNARD,N.C.<br>CHRISTOPHERSEN,P.<br>FOLKESTAD,K.<br>BROMMUNDT,G.<br>BAHNSEN,A.<br>PIEDLER,W. |
| 11/14/70 | 1500 | M-100 | USSR | 18D 00'S 114D 00'E | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/16/70 | 2108 | P037H | UNITED KINGDOM | SOUTH UIST | | | | C | | | | | | | N/A | ROTHWELL,P. |
| 11/17/70 | 1500 | M-100 | USSR | 29D 00'S 112D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/18/70 | 0320 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/18/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 84 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/18/70 | 1500 | M-100 | USSR | 32D 00'S 112D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/19/70 | 0616 | P047H | UNITED KINGDOM | SOUTH UIST | | | B | | | | | | | | 129 | RYCROFT,M.J.<br>BULLOUGH,K. |
| 11/19/70 | 1500 | M-100 | USSR | 35D 00'S 112D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/19/70 | 2200 | SL-904 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | | | | | | F | | | D | 209 | JANES,A.F.<br>BARNES,M.B. |
| 11/20/70 | 0000 | M-100 | USSR | 22D 00'S 069D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/20/70 | 0401 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/20/70 | 1600 | M-100 | USSR | 42D 00'S 116D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/20/70 | 2319 | AD 07.901-06 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 150 | MACLEOD,M.A.<br>ZIMMERMAN,S.<br>ROSENBERG,N.W. |
| 11/20/70 | 2319 | AD 07.917-01 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 170 | MACLEOD,M.A. |
| 11/20/70 | 2323 | AT 07.895 | UNITED STATES | EGLIN AFB | | G | D | | | | | | | | 120 | PHILBRICK,C.R.<br>DANDEKAR,B.S.<br>TURTLE,J.P. |
| 11/20/70 | 2323 | AT 07.896 | UNITED STATES | EGLIN AFB | | | D<br>C | | | | | | | | 130 | NARCISI,R.S.<br>PHILBRICK,C.R.<br>ULWICK,J.C. |
| 11/20/70 | 2326 | AD 07.917-03 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 155 | MACLEOD,M.A.<br>ROSENBERG,N.W. |
| 11/20/70 | 2326 | AD 07.917-02 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 165 | UNKNOWN |
| 11/21/70 | 1500 | M-100 | USSR | 45D 00'S 115D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/22/70 | 0000 | M-100 | USSR | 29D 00'S 070D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/23/70 | 0100 | M-100 | USSR | 34D 00'S 070D 00'E | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/23/70 | 1500 | M-100 | USSR | 48D 00'S 115D 00'E | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/24/70 | 1900 | M-100 | USSR | 40D 00'S 070D 00'E | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/24/70 | 2356 | AD 21.862 | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | B | 300 | ROTMAN,W. |
| 11/25/70 | 0330 | NB 22.208 | UNITED STATES | WALLOPS ISLAND | | | | | | E | | | | | 1480 | CARRUTHERS,G.R.<br>WELLER,C.S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/26/70 | 0801 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/26/70 | 1700 | M-100 | USSR | 48D 00'S 071D 00'E | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/27/70 | 0525 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 86 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/27/70 | 2015 | MP-12 | USSR | KHEISA ISLAND | | G | | | | | | | | | 160 | INST OF EXPERIMENTAL METEOROLOGY |
| 11/29/70 | 1500 | M-100 | USSR | 40D 00'S 135D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 11/30/70 | 0300 | M-100 | USSR | 49D 00'S 070D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/02/70 | 0832 | AD 04.004-03 | UNITED STATES | WHITE SANDS | C | | | | | | B | | | | 189 | HOUCK, J.R. |
| 12/02/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 96 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/02/70 | 1900 | M-100 | USSR | 55D 00'S 070D 00'E | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/02/70 | 2100 | M-100 | USSR | 54D 00'S 070D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/03/70 | 0703 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/03/70 | 1000 | M-100 | USSR | 00D 00' 160D 00'E | | J | | | | | | | | | 87 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/05/70 | 1900 | M-100 | USSR | 40D 00'S 085D 00'E | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/06/70 | 1000 | M-100 | USSR | 00D 00' 160D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/06/70 | 1100 | S-69 | ITALY UNITED KINGDOM | SARDINIA | | | | | | F | | | | | 187 | UNKNOWN |
| 12/06/70 | 1113 | S69 | UNITED KINGDOM | SARDINIA | | | | | | F | | | | | 187 | EVANS, K.D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/07/70 | 1500 | M-100 | USSR | 50D 00'S 097D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/07/70 | 2134 | AKF-4 -019 | CANADA | FORT CHURCHILL | C | | | | | | F | | | | 770 | HARRISON,A.W.<br>WILSON,B.G. |
| 12/08/70 | 1500 | M-100 | USSR | 40D 00'S 159D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/09/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 95 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/09/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/09/70 | 1000 | M-100 | USSR | 08D 00'S 162D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/09/70 | 1745 | ISRO 08.01 | INDIA<br>USSR | THUMBA | | A<br>B<br>C | | | | | | | | | 91 | FEDYNSKI,A.V.<br>PISHAROTY,P.R. |
| 12/11/70 | 0341 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/11/70 | 1000 | M-100 | USSR | 17D 00'S 162D 00'E | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/13/70 | 1500 | M-100 | USSR | 40D 00'S 180D 00' | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/14/70 | 1002 | AAD-58-030 | CANADA<br>UNITED STATES<br>CZECHOSLOVAKIA<br>SWEDEN | FORT CHURCHILL | | | C | | | | | A | | | 340 | WLOCHOWICZ,R.<br>MCNAMARA,A.G.<br>TENNYSON,R.C.<br>ALEXANDER,W.M.<br>SIMEK,M.<br>ZACHAROV,V.<br>LINDBLAD,B.A.<br>BURBANK,P. |
| 12/14/70 | 1400 | M-100 | USSR | 00D 00' 137D 00'E | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/14/70 | 1500 | M-100 | USSR | 38D 00'S 179D 00'E | | J | | | | | | | | | 85 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/15/70 | 0308 | NASA 14.470 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 208 | BEDINGER, J.F. |
| 12/15/70 | 0518 | NASA 14.471 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 214 | BEDINGER, J.F. |
| 12/15/70 | 0700 | NASA 14.472 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 213 | BEDINGER, J.F. |
| 12/15/70 | 0904 | NASA 14.473 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 195 | BEDINGER, J.F. |
| 12/15/70 | 1127 | NASA 14.474 CM | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | | 215 | BEDINGER, J.F. |
| 12/16/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/16/70 | 0900 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/16/70 | 1500 | M-100 | USSR | 32D 00'S 180D 00' | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/16/70 | 1736 | ISRO 08.02 | INDIA<br>USSR | THUMBA | | A<br>B<br>C | | | | | | | | | 93 | FEDYNSKI, A.V.<br>PISHAROTY, P.R. |
| 12/17/70 | 1800 | M-100 | USSR | 27D 00'S 112D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/18/70 | 0530 | MP-12 | USSR | KAPUSTIN YAR | | | C | | | | | | | | 160 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/19/70 | 1400 | M-100 | USSR | 38D 00'S 163D 00'E | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/22/70 | 0332 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/22/70 | 0700 | M-100 | USSR | 50D 00'N 165D 00'W | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/22/70 | 1000 | MP-12 | USSR | KAPUSTIN YAR | | G | | | | | | | | | 170 | INST OF EXPERIMENTAL METEOROLOGY |
| 12/22/70 | 1825 | MP-12 | USSR | KHEISA ISLAND | | F | | | | | | | | | 185 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/22/70 | 2330 | MP-12 | USSR | KAPUSTIN YAR | | B<br>G | | | | | | | | | 165 | INST OF EXPERIMENTAL METEOROLOGY |
| 12/23/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/23/70 | 0906 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/23/70 | 1400 | M-100 | USSR | 48D 00'S 165D 00'W | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/23/70 | 1730 | ISRO CB.03 | INDIA<br>USSR | THUMBA | | A<br>B<br>C | | | | | | | | | 93 | FEDYNSKI, A.V.<br>PISHAROTY, P.R. |
| 12/24/70 | 1103 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/26/70 | 1500 | M-100 | USSR | 14D 00'S 180D 00' | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/27/70 | 1400 | M-100 | USSR | 00D 00' 140D 00'E | | J | | | | | | | | | 88 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/28/70 | 1400 | M-100 | USSR | 00D 00' 140D 00'E | | J | | | | | | | | | 89 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/28/70 | 1400 | MP-12 | USSR | KHEISA ISLAND | | F | | | | | | | | | 150 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/28/70 | 2000 | M-100 | USSR | 00D 00' 140D 00'E | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/29/70 | 1100 | M-100 | USSR | 40D 00'S 154D 00'W | | J | | | | | | | | | 92 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/29/70 | 2008 | MP-12 | USSR | KHEISA ISLAND | | G | | | | | | | | | 160 | INST OF EXPERIMENTAL METEOROLOGY |
| 12/30/70 | 0200 | M-100 | USSR | MOLODEZHNAYA | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/30/70 | 0431 | M-100 | USSR | KAPUSTIN YAR | | J | | | | | | | | | 90 | CENTRAL AEROLOGICAL OBSERVATORY |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/30/70 | 0855 | M-100 | USSR | KHEISA ISLAND | | J | | | | | | | | | 93 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/30/70 | 1500 | M-100 | USSR | 00D 00' 180D 00' | | J | | | | | | | | | 94 | CENTRAL AEROLOGICAL OBSERVATORY |
| 12/30/70 | 1735 | ISRO 08.04 | INDIA<br>USSR | THUMBA | | A<br>B<br>C | | | | | | | | | 94 | FEDYNSKI, A.V.<br>PISHAROTY, P.R. |
| 12/31/70 | 0700 | M-100 | USSR | 32D 00'S 154D 00'W | | J | | | | | | | | | 91 | CENTRAL AEROLOGICAL OBSERVATORY |
| 01/06/71 | 1730 | ISRO 08.05 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 89 | PISHAROTY, P.R.<br>FEDYNSKI, A.V. |
| 01/07/71 | 0027 | ISRO 05.12 B | INDIA | THUMBA | | V | | | | | | | | D | 150 | ABDUL KALAM, A.P.J.<br>BHAVSAR, P.D.<br>DESAI, J.N. |
| 01/07/71 | 2001 | NASA 10.365 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 122 | THEON, J.S. |
| 01/07/71 | 2030 | NASA 10.372 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 131 | THEON, J.S. |
| 01/08/71 | 1502 | ESRO SK83/001 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 67 | SCOTT, A.F.D. |
| 01/08/71 | 2141 | AO C7.016-03 | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | 278 | FAIRE, A.C. |
| 01/08/71 | 2231 | AO C7.015-02 | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | 276 | FAIRE, A.C. |
| 01/12/71 | 0750 | NASA 10.366 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 116 | THEON, J.S. |
| 01/12/71 | 2053 | NASA 10.373 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 133 | THEON, J.S. |
| 01/13/71 | 1735 | ISRO 08.06 | INDIA | THUMBA | | J | | | | | | | | | 94 | PISHAROTY, P.R.<br>FEDYNSKI, A.V. |
| 01/13/71 | 2010 | ADD-2 -124 | CANADA<br>INDIA<br>USSR | FORT CHURCHILL | C | C | C | | | | | A | | | 146 | JONES, A.V.<br>LLEWELLYN, E.J.<br>RYDER, P.<br>MILLER, D.E.<br>MCNAMARA, A.G.<br>WLOCHOWICZ, R. |
| 01/15/71 | 1525 | ESRO SK83/002 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 69 | SCOTT, A.F.D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/16/71 | 0200 | S -210-04<br>T -097-001 | JAPAN | KAGOSHIMA | | | E<br>F | | | | | | | | 115 | OYAMA,K.<br>TANAKA,T. |
| 01/16/71 | 0715 | K -09M-30<br>S -087-002 | JAPAN | KAGOSHIMA | | | | | | | | | | D | 357 | TOHMATSU,T.<br>OGAWA,T.<br>HAYASHI,T. |
| 01/16/71 | 0715 | K -09M-30 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 357 | MORI,H. |
| 01/16/71 | 0715 | K -09M-30<br>S -087-005 | JAPAN | KAGOSHIMA | | D<br>G | | | | D | | | | | 357 | OGAWA,T.<br>WATANABE,T.<br>TOHMATSU,T. |
| 01/16/71 | 0715 | K -09M-30 | JAPAN | KAGOSHIMA | | | E | | | | | | | | 357 | OYAMA,K. |
| 01/17/71 | 1448 | ESROC37/002 | FED REP OF GERMANY | KIRUNA | | V | C | | | | | | | | 215 | RIEGER,E.<br>MELZNER,F. |
| 01/17/71 | 1533 | NIKE-TOMAHAWK | FED REP OF GERMANY | ANDOYA | | | C | | B | | | | | | 328 | HAERENDEL,G.<br>MELZNER,F. |
| 01/17/71 | 1600 | ESRO SK83/003 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 35 | SCOTT,A.F.D. |
| 01/19/71 | 1520 | ESRO SK83/004 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 71 | SCOTT,A.F.D. |
| 01/19/71 | 1943 | AFCRL 71-1 | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | A | 146 | WRIGHT,J.B. |
| 01/20/71 | 0430 | ISRO 08.07 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 91 | PISHAROTY,P.R.<br>FEDYNSKI,A.V. |
| 01/20/71 | 1730 | ISRO 08.08 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 90 | PISHAROTY,P.R.<br>FEDYNSKI,A.V. |
| 01/21/71 | 0232 | AKD-EB-027 | CANADA | FORT CHURCHILL | B | | B<br>C<br>E | D | A | | | | | | 245 | BROOKS,D.<br>CLOUTIER,G.G.<br>KAVADAS,A.<br>WHALEN,B.A.<br>MCNAMARA,A.G.<br>ANGER,C.D. |
| 01/21/71 | 1507 | ESRO SK83/005 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 69 | SCOTT,A.F.D. |
| 01/21/71 | 1818 | AFCRL 71-2 | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | A | 130 | WRIGHT,J.B. |
| 01/21/71 | 1902 | AFCRL 71-3 | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | A | 129 | WRIGHT,J.B. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/21/71 | 1938 | AFCRL 71-4 | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | A | 132 | WRIGHT, J. B. |
| 01/21/71 | 2019 | AFCRL 71-5 | UNITED STATES | WALLOPS ISLAND | | Y | | | | | | | | A | 132 | WRIGHT, J. B. |
| 01/22/71 | 0444 | ADD-SB-024 | CANADA<br>UNITED STATES | FORT CHURCHILL | B | | C<br>E | D | | | | A | | | 375 | MCEWEN, D. J.<br>MCNAMARA, A. G.<br>JUDGE, R. J. R.<br>JONES, A. V.<br>WLOCHOWICZ, R. |
| 01/22/71 | 2023 | NIKE-TOMAHAWK | NORWAY<br>AUSTRIA<br>UNITED STATES | ANDOYA | B<br>C | | C | D | | | | | | D | 253 | EVANS, D.<br>FOLKESTAD, K.<br>MAEHLUM, B. N.<br>RIEDLER, W. W.<br>SKOVLI, G. |
| 01/23/71 | 1120 | K-CSM-35<br>S-CSB-002 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 340 | KAMADA, T<br>TOKUDA, S.<br>URIMOTO, S.<br>OYAMA, M. |
| 01/23/71 | 1120 | K-CSM-35<br>S-CSB-004 | JAPAN | KAGOSHIMA | | | C | | | | | | | | 340 | EJIRI, M.<br>OYA, H. |
| 01/23/71 | 1320 | K-CSM-35<br>S-CSB-001 | JAPAN | KAGOSHIMA | | | A<br>B | | | | | | | | 338 | MIYATAKE, S. |
| 01/23/71 | 1320 | K-CSM-35<br>S-CSB-003 | JAPAN | KAGOSHIMA | | | A<br>C | | | | | | | | 338 | HIRAISHI, K. |
| 01/23/71 | 1553 | ESRO SK83/006 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 67 | SCOTT, A. F. D. |
| 01/24/71 | 0200 | K-CSM-34<br>S-CS9-001 | JAPAN | KAGOSHIMA | | | | | | | F | | | | 328 | NAKAGAWA, M.<br>TAKAGISHI, K.<br>OGAWARA, Y. |
| 01/24/71 | 0200 | K-CSM-34<br>S-CS9-002 | JAPAN | KAGOSHIMA | | | | | | E | | | | | 328 | HIGASHI, K.<br>YAMAGUCHI, A. |
| 01/24/71 | 0200 | K-CSM-34 | JAPAN | KAGOSHIMA | | | E | | | | | | | | 328 | OYAMA, K. |
| 01/24/71 | 0200 | K-CSM-34<br>S-CS9-004 | JAPAN | KAGOSHIMA | | | B | | | | | | | | 328 | AOYAMA, I.<br>TOYAMA, F. |
| 01/25/71 | 1238 | ESROC60/001 | FED REP OF GERMANY | KIRUNA | | | | B | | | | | | | 175 | WITTE, M. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/25/71 | 1510 | ESRO SK83/007 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 68 | SCOTT,A.F.D. |
| 01/26/71 | 1050 | ESROC60/002 | FED REP OF GERMANY | KIRUNA | | | | B | | | | | | | 167 | WITTE,M. |
| 01/26/71 | 1322 | ESROR40/007 | UNITED KINGDOM<br>DENMARK<br>NETHERLANDS | KIRUNA | | | C | B | | | | | | | 145 | WRENN,G.L.<br>JESPERSEN,M.<br>VAN BEEK,H.F. |
| 01/26/71 | 1723 | AMD-SB-026 | CANADA<br>UNITED STATES | FORT CHURCHILL | | | C<br>D<br>E | | | C | | | | | 280 | SHEPHERD,G.G.<br>BROOKS,D.<br>CLOUTIER,G.G.<br>MCNAMARA,A.G.<br>HAYS,P.B. |
| 01/27/71 | 1525 | ESRO SK83/008 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 47 | SCOTT,A.F.D. |
| 01/27/71 | 2302 | ESROC78/001 | BELGIUM<br>FED REP OF GERMANY<br>NETHERLANDS | KIRUNA | B | | C | D | | | | | | | 140 | MONFILS,A.<br>RAWER,K.<br>PAGE,D.E. |
| 01/28/71 | 0510 | ISRO 10.37<br>NASA | INDIA | THUMBA | | | A | | | S | | | | | 163 | PRAKASH,S.<br>SHIRKE,J.S.<br>RAO,R.R. |
| 01/28/71 | 0540 | ISRO 10.38<br>NASA | INDIA | THUMBA | | | C<br>G | | | | | | | | 189 | PRAKASH,S.<br>SASTRY,T.S.G.<br>RAO,R.R. |
| 01/28/71 | 1555 | NIKE-TOMAHAWK | FED REP OF GERMANY<br>UNITED KINGDOM | ANDOYA | | | B<br>C | | B | | | | | | 276 | BURROWS,K.<br>HAERENDEL,G.<br>MELZNER,F.<br>REES,D. |
| 01/28/71 | 1833 | ESROS46/002 | FED REP OF GERMANY<br>FRANCE<br>UNITED KINGDOM | KIRUNA | | | C | D | | | | | | | 218 | UNGER,L.<br>REME,H.<br>GIBBONS,W. |
| 01/29/71 | 0825 | SL-1C01 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | | | | | | F | | | | 203 | SANFORD,P.W.<br>CRUISE,A.M.<br>FABIAN,A.C. |
| 01/29/71 | 1703 | NASA 14.167 GI | UNITED STATES | KEWEENAW | | | | D | | | | | | | 122 | AIKIN,A.C. |
| 01/29/71 | 1721 | ESRO SK83/C09 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 71 | SCOTT,A.F.D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01/29/71 | 1948 | NASA 15.50 GI | UNITED STATES | WALLOPS ISLAND | | | C E | D | | | | | | | 122 | KANE, J.A. |
| 01/30/71 | 0522 | ISRO 08.09 | INDIA USSR | THUMBA | | J | | | | | | | | | 89 | PISHAROTY, P.R. FEDYNSKI, A.V. |
| 01/31/71 | 1645 | ESRO SK83/010 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 70 | SCOTT, A.F.D. |
| 01/31/71 | 1855 | NASA 14.373 GI | UNITED STATES | KEWEENAW | | | | D | | | | | | | 185 | GOLDBERG, R.A. |
| 02/03/71 | 1812 | ESRO SK83/011 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 68 | SCOTT, A.F.D. |
| 02/03/71 | 1905 | ISRO 08.10 | INDIA USSR | THUMBA | | J | | | | | | | | | 91 | FEDYNSKI, A.V. PISHAROTY, P.R. |
| 02/05/71 | 2246 | AKF-4B-024 | CANADA | FORT CHURCHILL | B | | C | | | | | A | | | 734 | HARRISON, A.W. BARRINGTON, R.E. WLOCHOWICZ, R. |
| 02/06/71 | 1830 | ESROS80/001 | UNITED KINGDOM FED REP OF GERMANY | SARDINIA | | G | C D E | | | E | | | | | 222 | SAYERS, J. HALL, J.E. KRANKOWSKY, D. VON ZAHN, U. |
| 02/06/71 | 2322 | ESROS80/002 | UNITED KINGDOM FED REP OF GERMANY | SARDINIA | | G | C D E | | | E | | | | | 226 | SAYERS, J. HALL, J.E. KRANKOWSKY, D. VON ZAHN, U. |
| 02/07/71 | 0345 | ESROS80/003 | UNITED KINGDOM FED REP OF GERMANY | SARDINIA | | G | C D E | | | E | | | | | 214 | SAYERS, J. HALL, J.E. KRANKOWSKY, D. VON ZAHN, U. |
| 02/08/71 | 2048 | ESRO SK83/012 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 48 | SCOTT, A.F.D. |
| 02/09/71 | 1800 | ESRO SK83/013 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 67 | SCOTT, A.F.D. |
| 02/10/71 | 1800 | ISRO 08.11 | INDIA USSR | THUMBA | | J | | | | | | | | | 91 | FEDYNSKI, A.V. PISHAROTY, P.R. |
| 02/11/71 | 1750 | ESRO SK83/014 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 65 | SCOTT, A.F.D. |
| 02/12/71 | 1730 | ESRO SK83/015 | UNITED KINGDOM | KIRUNA | | Y | | | | | | | | | 67 | SCOTT, A.F.D. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02/17/71 | 1800 | ISRO C8.12 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 84 | FEDYNSKI,A.V.<br>PISHAROTY,P.R. |
| 02/20/71 | 0323 | NASA 15.75 UI | UNITED STATES | FORT CHURCHILL | | | | D | A | F | | | | | 59 | KERN,J.W. |
| 02/20/71 | 0323 | AKF-4A-018 | CANADA | FORT CHURCHILL | B | | C | D | | | | | | | 760 | ANGER,C.D.<br>WHALEN,B.A.<br>MCNAMARA,A.G. |
| 02/22/71 | 1140 | ESROSS5/ | UNITED KINGDOM | WOOMERA | | | | | | | E | | | | 222 | SHENTON,D.B. |
| 02/24/71 | 1300 | ISRO C8.13 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 91 | FEDYNSKI,A.V.<br>PISHAROTY,P.R. |
| 02/24/71 | 2158 | NASA 15.84 GM | UNITED STATES | BARKING SANDS | | G | | | | | | | | | 57 | KRUEGER,A.J. |
| 02/26/71 | 1018 | ESROSS4/ | UNITED KINGDOM | SARDINIA | | | | | | F | | | | | 250 | GLENCROSS,W.M. |
| 02/28/71 | 0753 | AND-3 -041 | CANADA | FORT CHURCHILL | E | | | | | | | | | | 152 | GUSH,H. |
| 03/02/71 | 1038 | SL-522 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | | B<br>C<br>D<br>E<br>G | | | | | | | | 223 | REES,D.<br>WRENN,G.L.<br>BURROWS,K. |
| 03/03/71 | 0652 | NASA 15.89 UI | UNITED STATES | FORT CHURCHILL | | | | D | A | F | | | | | 65 | KERN,J.W. |
| 03/03/71 | 0652 | AAF-SB-032 | CANADA | FORT CHURCHILL | B<br>D | | B<br>C<br>D | D | | | | | | | 275 | WHALEN,B.A.<br>ANGER,C.D.<br>CLOUTIER,G.G.<br>BROOKS,D.<br>VISENTIN,J.<br>DE LEEUW,J.H.<br>DAVIES,W.E.R.<br>KAVADAS,A.<br>KOEHLER,J.A.<br>ROSTOKER,G. |
| 03/03/71 | 1800 | ISRO C8.14 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 90 | FEDYNSKI,A.V.<br>PISHAROTY,P.R.<br>NARAYANAN,V. |
| 03/03/71 | 2158 | NASA 15.85 GM | UNITED STATES | BARKING SANDS | | G | | | | | | | | | 59 | KRUEGER,A.J. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/05/71 | 2207 | NASA 15.86 GM | UNITED STATES | BARKING SANDS | | G L | | | | | | | | | 58 | KRUEGER,A.J. |
| 03/10/71 | 1738 | NASA 10.382 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | D | 113 | THEON,J.S. |
| 03/10/71 | 1753 | NASA 14.478 UM | UNITED STATES | WALLOPS ISLAND | | B C F | | | | | | | | | 179 | HORVATH,J.J. |
| 03/10/71 | 1800 | ISRO C8.15 | INDIA USSR | THUMBA | | J | | | | | | | | | 90 | FEDYNSKI,A.V. PISHAROTY,P.R. NARAYANAN,V. |
| 03/10/71 | 1826 | NASA 14.479 UM | UNITED STATES | WALLOPS ISLAND | | B C F | | | | | | | | | 178 | HORVATH,J.J. |
| 03/10/71 | 1841 | NASA 14.480 UM | UNITED STATES | WALLOPS ISLAND | | B C F | | | | | | | | | 171 | HORVATH,J.J. |
| 03/10/71 | 1911 | NASA 10.383 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 113 | THEON,J.S. |
| 03/11/71 | 0856 | ESROSS5/ | FED REP OF GERMANY UNITED KINGDOM | SARDINIA | | | | | | F | F | | | | 159 | BRAUNIGER,H. GRIFFITHS,R. |
| 03/12/71 | 0513 | AO C7.015-03 | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | 280 | FAIRE,A.C. |
| 03/12/71 | 0655 | AO 07.913-03 | UNITED STATES | WHITE SANDS | | Y | | | | | | | | | 283 | FAIRE,A.C. |
| 03/12/71 | 2114 | ESRCS16/002 | UNITED KINGDOM UNITED STATES | KIRUNA | | | B | | A B | | | | | | 143 | WRENN,G.L. BURROWS,K. AGGSON,T.L. |
| 03/15/71 | 0601 | NASA 10.375 GM | UNITED STATES | KOUROU | | G | | | | | | | | | 73 | WRIGHT,D.U. |
| 03/15/71 | 1755 | ESROS87/001 | SWEDEN NETHERLANDS FED REP OF GERMANY | KIRUNA | | V | | | B | | | | | | 188 | FAHLESON,U.V. PEDERSEN,A. SCHUMANN,G. RAWER,K. HAERENDEL,G. |
| 03/16/71 | 1316 | NASA 10.376 GM | UNITED STATES | KOUROU | | G | | | | | | | | | 76 | WRIGHT,D.U. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/16/71 | 1900 | A04.002-02 | UNITED STATES | WHITE SANDS | | | | | | E | | | | | 270 | HIGGINS,J.E.<br>HINTEREGGER,H.E.<br>CHAGNON,C.W. |
| 03/17/71 | 1700 | ISRO C8.16 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 92 | FEDYNSKI,A.V.<br>PISHAROTY,P.R.<br>NARAYANAN,V. |
| 03/18/71 | 1939 | NASA 1C.380 GM | UNITED STATES | KOUROU | | Z | | | | | | | | | 125 | WRIGHT,D.U. |
| 03/19/71 | 1744 | AO 08.019-01 | UNITED STATES | FORT CHURCHILL | | | B | D | A | | | | | | 336 | VANCOUR,R.P. |
| 03/19/71 | 1745 | AO 07.019-02 | UNITED STATES | FORT CHURCHILL | | | G | | A | | | | | | 164 | VANCOUR,R.P. |
| 03/20/71 | 0324 | AMD-SB-115 | CANADA | FORT CHURCHILL | B | | C | | | | | | | X | 151 | NICHOLLS,R.W.<br>MCEWEN,D.J.<br>MCNAMARA,A.G.<br>WLOCHOWICZ,P. |
| 03/24/71 | 0526 | A18.006-03 | UNITED STATES | FORT CHURCHILL | B<br>C | | | | | | | | | | 387 | STAIR,A.T. |
| 03/24/71 | 1700 | ISRO C8.17 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 89 | FEDYNSKI,A.V.<br>PISHAROTY,P.R.<br>NARAYANAN,V. |
| 03/24/71 | 1832 | ESRO S87/002 | SWEDEN<br>NETHERLANDS<br>FED REP OF GERMANY | KIRUNA | | V | | | B | | | | | | 190 | FAHLESON,U.V.<br>PEDERSEN,A.<br>SCHUMANN,G.<br>RAWER,K.<br>HAERENDEL,G. |
| 03/25/71 | 1350 | ESRO S56B/01 | UNITED KINGDOM<br>FED REP OF GERMANY | SARDINIA | | G | C | | | E<br>F | | | | | 130 | HALL,J.E.<br>VON ZAHN,U. |
| 03/31/71 | 1700 | ISRO C8.18 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 89 | FEDYNSKI,A.V.<br>PISHAROTY,P.R.<br>NARAYANAN,V. |
| 04/03/71 | 0950 | AO 04.004-02 | UNITED STATES | WHITE SANDS | | | | | | | X | | | | 158 | WALKER,R.W. |
| 04/05/71 | 1357 | ISRO 08.19 | INDIA<br>USSR | THUMBA | | V | | | | | | | | | N/A | BHAVSAR,P.D.<br>DESAI,J.N. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/05/71 | 1432 | ISRO CE.20 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | N/A | FEDYNSKI,A.V.<br>PISHAROTY,P.R.<br>NARAYANAN,V. |
| 04/19/71 | 1325 | ISRO 10.41<br>NASA | INDIA<br>UNITED STATES | THUMBA | | V | | | | | | | | | 198 | BHAVSAR,P.D.<br>DESAI,J.N. |
| 04/23/71 | 0148 | NASA 14.467 UA | UNITED STATES<br>SWEDEN<br>FED REP OF GERMANY | WHITE SANDS | | | | | | | | A | | | 124 | TOSER,W.<br>WIESEL,T.<br>RAUSER,P. |
| 04/25/71 | 0600 | ISRO 10.40<br>NASA | INDIA<br>JAPAN<br>UNITED STATES | THUMBA | | | C<br>E | | B | | | | | | 160 | SASTRY,T.S.G.<br>OBAYASHI,T.<br>HIRAO,K. |
| 04/25/71 | 1325 | ISRO 10.39<br>NASA | INDIA<br>JAPAN<br>UNITED STATES | THUMBA | | V | C<br>E | | | | | | | | N/A | BHAVSAR,P.D.<br>DESAI,J.N.<br>OBAYASHI,T.<br>HIRAO,K. |
| 04/30/71 | 0608 | ISRO 10.42<br>NASA | INDIA<br>UNITED STATES | THUMBA | | | B<br>C | | B | | | | | | 171 | SASTRY,T.S.G.<br>DEOGAONKAR,S.S. |
| 05/06/71 | 0016 | AOC7.902-C7 | UNITED KINGDOM<br>UNITED STATES | EGLIN AFB | | | D | | | | | | | | 120 | WOOLLISCROFT,L.J.C |
| 05/08/71 | 1600 | AOC7.902-C8 | UNITED KINGDOM<br>UNITED STATES | EGLIN AFB | | | D | | | | | | | | 135 | WOOLLISCROFT,L.J.C |
| 05/10/71 | 1203 | SL-812 | AUSTRALIA<br>UNITED KINGDOM | WOOMERA | | | | | | | F | | | | 219 | ADAMS,D.J. |
| 05/18/71 | 0024 | AO 07.913-05 | UNITED STATES | EGLIN AFB | | G<br>Y | | | | | | | | | 145 | FAIRE,A.C.<br>WEEKS,L.H. |
| 05/18/71 | 0106 | AO 07.917-05 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 180 | ROSENBERG,N.W. |
| 05/18/71 | 0108 | AO 07.918-02 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 150 | ROSENBERG,N.W. |
| 05/18/71 | 0241 | A18.006-03 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 203 | GOLOMB,D. |
| 05/18/71 | 0305 | AO 07.918-04 | UNITED STATES | EGLIN AFB | | V<br>Y | | | | | | | | | 161 | GOLOMB,D. |
| 05/18/71 | 1009 | AO 07.917-06 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 148 | ROSENBERG,N.W. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05/19/71 | 0114 | AO 07.918-03 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 137 | ROSENBERG,N.W. |
| 05/19/71 | 0206 | AO 07.921-01 | UNITED STATES | EGLIN AFB | | V<br>Y | | | | | | | | | 148 | ROSENBERG,N.W.<br>FAIRE,A.C. |
| 05/19/71 | 1505 | ISRO 08.21 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 90 | PISHAROTY,P.R.<br>NARAYANAN,V.<br>FEDYNSKI,A.V. |
| 05/21/71 | 0115 | AO 07.917-04 | UNITED STATES | EGLIN AFB | | V | | | | | | | | | 148 | ROSENBERG,N.W. |
| 05/26/71 | 1510 | ISRO 08.22 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 92 | PISHAROTY,P.R.<br>NARAYANAN,V.<br>FEDYNSKI,A.V. |
| 06/02/71 | 1500 | ISRO 08.23 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 89 | PISHAROTY,P.R.<br>NARAYANAN,V.<br>FEDYNSKI,A.V. |
| 06/09/71 | 1509 | ISRO 08.24 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | N/A | PISHAROTY,P.R.<br>NARAYANAN,V.<br>FEDYNSKI,A.V. |
| 06/16/71 | 1500 | ISRO 08.25 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 91 | PISHAROTY,P.R.<br>NARAYANAN,V.<br>FEDYNSKI,A.V. |
| 06/23/71 | 1515 | ISRO 08.26 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | N/A | PISHAROTY,P.R.<br>NARAYANAN,V.<br>FEDYNSKI,A.V. |
| 06/24/71 | 1500 | NASA 10.367 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 111 | WRIGHT,D.U. |
| 06/24/71 | 1507 | NASA 10.334 GM | UNITED STATES<br>CANADA | FORT CHURCHILL | | Z | | | | | | | | | 124 | WRIGHT,D.U. |
| 06/24/71 | 1510 | NASA 10.371 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 114 | WRIGHT,D.U. |
| 06/29/71 | 0810 | AO 04.004-04 | UNITED STATES | WHITE SANDS | E | | | | | | | | | | 162 | WALKER,R.W. |
| 06/30/71 | 1636 | ISRO 08.27 | INDIA<br>USSR | THUMBA | | J | | | | | | | | | 88 | PISHAROTY,P.R.<br>NARAYANAN,V.<br>FEDYNSKI,A.V. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07/02/71 | 1437 | NASA 10.328 GM | UNITED STATES CANADA | FORT CHURCHILL | | Z | | | | | | | | | 122 | WRIGHT,D.U. |
| 07/02/71 | 1959 | NASA 10.368 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 95 | WRIGHT,D.U. |
| 07/02/71 | 2005 | NASA 10.336 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 122 | WRIGHT,D.U. |
| 07/09/71 | 1943 | NASA 12.022 GT | UNITED STATES | WHITE SANDS | | | | | | | | | | C D | N/A | BUSSE,J.R. WINDSOR,R. |
| 07/12/71 | 1506 | NASA 10.370 GM | UNITED STATES CANADA | FORT CHURCHILL | | Z | | | | | | | | | 125 | WRIGHT,D.U. |
| 07/12/71 | 1518 | NASA 10.381 GM | UNITED STATES | POINT BARROW | | Z | | | | | | | | | 109 | WRIGHT,D.U. |
| 07/12/71 | 1606 | NASA 10.374 GM | UNITED STATES | WALLOPS ISLAND | | Z | | | | | | | | | 136 | WRIGHT,D.U. |
| 07/13/71 | 0250 | NASA 18.117UI | UNITED STATES | WALLOPS ISLAND | | | X | | | | | | | | N/A | HANSON,W.B. |
| 07/13/71 | 1830 | NASA 18.118UI | UNITED STATES | WALLOPS ISLAND | X | | X | | | | | | | | N/A | HANSON,W.B. |
| 07/21/71 | 1600 | NASA 21.004 GT | UNITED STATES | WALLOPS ISLAND | | | | | | | | | | A C D | N/A | OTT,R.H.,JR. |
| 07/27/71 | 1318 | NASA 13.052 UA | UNITED STATES | WHITE SANDS | E | | | | | | | | | | N/A | HANSEN,W.H. |
| 07/31/71 | 0045 | NASA 14.468 UA | UNITED STATES SWEDEN | KIRUNA | | K | | | | | | | | | 114 | HALLGREN,D.S. |
| 07/31/71 | 0045 | NASA 14.468UA | UNITED STATES SWEDEN | KIRUNA | | K | | | | | | | | | 114 | HEMENWAY,C.L. HALLGREN,D.S. |
| 07/31/71 | 2334 | NASA 14.469 UA | UNITED STATES SWEDEN | KIRUNA | | K | | | | | | | | | 106 | HALLGREN,D.S. |
| 07/31/71 | 2334 | NASA 14.469 UA | UNITED STATES SWEDEN | KIRUNA | | K | | | | | | | | | 106 | HEMENWAY,C.L. HALLGREN,D.S. |
| 08/03/71 | 1916 | NASA 15.046 UI | UNITED STATES | WALLOPS ISLAND | | | X | | | | | | | | N/A | KENDALL,B.R. |
| 08/07/71 | 1949 | NASA 15.87 GM | UNITED STATES | | | G | | | | | | | | | N/A | KRUEGER,A.J. NKNOWN |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/08/71 | 1212 | NIKE-CAJUN | AUSTRIA<br>FED REP OF GERMANY<br>NORWAY | ANDOYA | | H | C<br>D | C<br>D | | | | | | A<br>D | 100 | FOLKESTAD,K.<br>JOHANNESSEN,A.<br>KRANKOWSKY,D.<br>RIEDLER,W.W.<br>SKOVLI,G.<br>THRANE,E. |
| 08/09/71 | 2012 | NASA 15.88 GM | UNITED STATES | | | G | | | | | | | | | N/A | KRUEGER,A.J. |
| 08/10/71 | 0440 | NASA 13.18 DG | UNITED STATES | WHITE SANDS | | | | | | | | | | | N/A | CARRUTHERS,G. |
| 08/10/71 | 0530 | NASA 13.08 GG | UNITED STATES | WHITE SANDS | | | | | | | | | | | N/A | HOLT,S. |
| 08/10/71 | 2013 | NASA 15.14 GI | UNITED STATES | WHITE SANDS | | | G | | | | | | | | 70 | SERBU,G.P. |
| 08/12/71 | 2110 | NASA 13.062 DS | UNITED STATES | WHITE SANDS | | | | | | X | | | | | N/A | TOUSEY,R. |
| 08/14/71 | 1954 | NASA 15.90 GM | UNITED STATES | | | G | | | | | | | | | N/A | KRUEGER,A.J. |
| 08/18/71 | 1200 | K-9M-31<br>S-C90-001 | JAPAN | KAGOSHIMA | | | | | | | F | | | | 330 | MIYAMOTO,S.<br>ODA,M.<br>MATSUOKA,M.<br>OGAWARA,Y. |
| 08/19/71 | 1832 | VIPER DART | UNITED STATES | WALLOPS ISLAND | | A<br>B<br>C<br>F | | | | | | | | | 135 | THEON,J.S.<br>OLSON,R. |
| 08/19/71 | 2011 | NASA 14.491 GM | UNITED STATES | WALLOPS ISLAND | | B<br>C<br>F | | | | | | | | | 171 | THEON,J.S.<br>WRIGHT,D.U.<br>HORVATH,J.J. |
| 08/20/71 | 0730 | NASA 10.390GM | UNITED STATES | WALLOPS ISLAND | | B<br>C<br>F<br>G | | | | | | | | | 132 | HILSENRATH,E.<br>HORVATH,J.J.<br>HENDERSON,H. |
| 08/20/71 | 0745 | NASA 14.492 GM | UNITED STATES | WALLOPS ISLAND | | B<br>C<br>F | | | | | | | | | 180 | THEON,J.S.<br>WRIGHT,D.U.<br>HORVATH,J.J. |
| 08/20/71 | 0919 | NASA 14.475 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | | 193 | MECHTLY,E.A.<br>BOWHILL,S.A.<br>SMITH,L.G. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08/20/71 | 0944 | NASA 14.476 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | | 198 | MECHTLY,E.A.<br>BOWHILL,S.A.<br>SMITH,L.G. |
| 08/20/71 | 1014 | NASA 14.477 UI | UNITED STATES | WALLOPS ISLAND | | | C<br>E | | | | | | | | 200 | MECHTLY,E.A.<br>BOWHILL,S.A.<br>SMITH,L.G. |
| 08/20/71 | 1210 | K-10 -07<br>S-091-001 | JAPAN | KAGOSHIMA | | | | | | | C | | | | 271 | TANABE,H.<br>TAKECHI,A. |
| 08/20/71 | 1210 | K-10 -07<br>S-091-002 | JAPAN | KAGOSHIMA | | | | | | | C | | | | 274 | MAKINO,T.<br>YAMAMOTO,H.<br>SEKIGUCHI,H. |
| 08/20/71 | 1210 | K-10 -07 | JAPAN | KAGOSHIMA | | | | | | | C | | | | 274 | NAKAMURA,M. |
| 08/20/71 | 1210 | K-10 -07<br>S-091-004 | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 271 | HIRAO,K.<br>OYAMA,K.<br>HEON,J.S.<br>OLSON,R. |
| 08/20/71 | 1956 | NASA 10.389GM | UNITED STATES | WALLOPS ISLAND | | B<br>C<br>F<br>G | | | | | | | | | 126 | HILSENRATH,E.<br>HORVATH,J.J.<br>HENDERSON,H. |
| 08/26/71 | 1035 | K-09M-33<br>S-093-001 | JAPAN | KAGOSHIMA | | | E | | | | | | | | 340 | HIRAO,K.<br>OYAMA,K |
| 08/26/71 | 1035 | K-09M-33<br>S-093-002 | JAPAN | KAGOSHIMA | | | C<br>F | | | | | | | | 340 | KATO,S.<br>ASO,T.<br>TSUJII,T. |
| 08/26/71 | 1035 | K-09M-33<br>S-093-003 | JAPAN | KAGOSHIMA | | | G | | | | | | | | 340 | NAKAMURA,J.<br>MATSUOKA,T.<br>OHCHI,N.<br>KATO,S.<br>KURIKI,I. |
| 08/26/71 | 1035 | K-09M-33<br>S-093-004 | JAPAN | KAGOSHIMA | | | G | | | | | | | | 340 | TAKEYA,Y.<br>TSUTSUMI,S.<br>SUZUKI,Y.<br>FUKUHARA,T.<br>MATSUTSUMOTO,H. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/01/71 | 0210 | K-10 -06<br>S-054-001 | JAPAN | KAGOSHIMA | | | | | | C | | | | | 228 | NISHI,K.<br>HIGASHI,K.<br>YAMAGUCHI,A. |
| 09/01/71 | 0210 | K-10 -06<br>S-054-002 | JAPAN | KAGOSHIMA | | | | | | C | | | | | 228 | OSHIO,T.<br>HIGASHINO,I.<br>SUZUKI,N<br>MASUOKA,T.<br>WATANABE,N.<br>KIKKAWA,J.<br>ISHAROTY,P.R.<br>NARAYANAN,V.<br>FEDYNSKI,A.V. |
| 09/02/71 | 0758 | NASA 14.434GE | UNITED STATES<br>CANADA | FORT CHURCHILL | | | A | | | | | | | | N/A | BERTSCH,D.L. |
| 09/03/71 | 1200 | L-03H-07<br>S-055-001 | JAPAN | KAGOSHIMA | | | E | | | | | | | | 1718 | HIRAO,K.<br>OYAMA,K. |
| 09/03/71 | 1200 | L-03H-07<br>S-055-002 | JAPAN | KAGOSHIMA | | | D | | | | | | | | 1718 | FUGONO,N.<br>SUITSU,T.<br>WADA,M. |
| 09/03/71 | 1200 | L-03H-07<br>S-055-003 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 1718 | KIMURA,I.<br>MATSUMOTO,H.<br>HASHIMOTO,K. |
| 09/03/71 | 1200 | L-03H-07<br>S-055-004 | JAPAN | KAGOSHIMA | | | D | | | | | | | | 1718 | MATSUMOTO,H.<br>UENO,M.<br>MATSUI,Y. |
| 09/03/71 | 1200 | L-03H-07<br>S-055-005 | JAPAN | KAGOSHIMA | C | | | | | | | | | D | 1718 | KONDO,T.<br>NAGASE,F. |
| 09/03/71 | 1200 | L-03H-07<br>S-055-006 | JAPAN | KAGOSHIMA | | | | | | | F | | | | 1718 | HAYAKAWA,S.<br>KOHNO,T.<br>NAGASE,F.<br>TANAKA,Y. |
| 09/03/71 | 1200 | L-03H-07<br>S-055-007 | JAPAN | KAGOSHIMA | | | A | | | | | | | | 1718 | YAMANAKA,C.<br>NAKAI,S.<br>IMAGAWA,T.<br>KASHIWARA,T.<br>IZAWA,Y. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/03/71 | 1200 | L-03H-07<br>S-05S-C08 | JAPAN | KAGOSHIMA | | H | | | | | | | | | 345 | KIMURA, I.<br>MATSUMOTO, H.<br>MIYATAKE, S. |
| 09/03/71 | 1200 | L-03H-C7<br>S-05S-C09 | JAPAN | KAGOSHIMA | | | A<br>E | | | | | | | | 1718 | TAKEYA, Y.<br>MINAMI, S. |
| 09/03/71 | 1200 | L-03H-C7<br>S-05S-01C | JAPAN | KAGOSHIMA | | | C<br>E | | | | | | | | 1718 | MIYAZAKI, S.<br>MORI, H. |
| 09/04/71 | 1352 | NASA 22.01 UE | UNITED STATES<br>CANADA | RESOLUTE BAY | | | | | | | | | | | N/A | ANDERSON, K. |
| 09/05/71 | 1344 | NASA 22.02 UE | UNITED STATES<br>CANADA | RESOLUTE BAY | | | | | | | | | | | N/A | ANDERSON, K. |
| 09/07/71 | 2357 | NASA 14.493 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | C | 176 | DUBIN, M.<br>BEDINGER, J.F. |
| 09/16/71 | 0956 | NASA 14.494 CA | UNITED STATES | WALLOPS ISLAND | | V | | | | | | | | D | 175 | DUBIN, M.<br>BEDINGER, J.F. |
| 09/19/71 | 2156 | NASA 10.348GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 125 | THEON, J.S. |
| 09/20/71 | 0330 | NASA 10.349GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 122 | THEON, J.S. |
| 09/20/71 | 0615 | NASA 10.354GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 115 | THEON, J.S. |
| 09/20/71 | 0930 | NASA 10.352GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 117 | THEON, J.S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/20/71 | 1445 | NASA 10.350GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 118 | THEON, J. S. |
| 09/20/71 | 1900 | NASA 10.353GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 116 | THEON, J. S. |
| 09/21/71 | 0005 | NASA 10.355GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 117 | THEON, J. S. |
| 09/21/71 | 0450 | NASA 10.356GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 114 | THEON, J. S. |
| 09/21/71 | 0914 | NASA 10.357GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 118 | THEON, J. S. |
| 09/21/71 | 0930 | A07.914-01 | UNITED STATES | WHITE SANDS | | F | | | | | | | | | 167 | COHEN, H. A. |
| 09/21/71 | 1400 | NASA 10.358GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 118 | THEON, J. S. |
| 09/21/71 | 1840 | NASA 10.359GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 116 | THEON, J. S. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09/21/71 | 2340 | NASA 10.360GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 116 | THEON, J. S. |
| 09/22/71 | 0350 | NASA 10.351GM | FRANCE<br>UNITED STATES | KOUROU | | A<br>B<br>C<br>F<br>Z | | | | | | | | | 118 | THEON, J. S. |
| 09/27/71 | 0930 | A07.017-01 | UNITED STATES | WHITE SANDS | | F | | | | | | | | | 170 | COHEN, H. A. |
| 10/05/71 | 1830 | AC8.103-02 | UNITED STATES | WALLOPS ISLAND | | F<br>G | | | | | | | | | 272 | WEEKS, L. H. |
| 10/05/71 | 2232 | AC7.913-06<br>A | UNITED STATES | WALLOPS ISLAND | | F<br>G | | | | | | | | | 189 | WEEKS, L. H. |
| 10/05/71 | 2233 | AC7.101-05 | UNITED STATES | WALLOPS ISLAND | | F<br>G | | | | | | | | | 117 | PHILBRICK, C. R. |
| 10/05/71 | 2242 | AC7.102-04 | UNITED STATES | WALLOPS ISLAND | | F<br>G | | | | | | | | | 232 | FAIRE, A. C. |
| 10/05/71 | 2303 | AC7.913-06 | UNITED STATES | WALLOPS ISLAND | | F<br>G | | | | | | | | | 222 | FAIRE, A. C. |
| 10/06/71 | 1000 | AC7.902-06 | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 120 | NARCISI, R. S. |
| 10/06/71 | 1011 | AC7.101-03 | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 118 | NARCISI, R. S. |
| 10/06/71 | 1044 | AC7.101-04 | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 119 | NARCISI, R. S. |
| 10/06/71 | 1105 | AC7.101-02 | UNITED STATES | WALLOPS ISLAND | | | D | | | | | | | | 117 | NARCISI, R. S.<br>ISHAROTY, P. R.<br>NARAYANAN, V.<br>FEDYNSKI, A. V. |
| 10/07/71 | 0045 | AC7.101-06 | UNITED STATES | WALLOPS ISLAND | | F<br>G | | | | | | | | | 119 | PHILBRICK, C. R. |
| 10/13/71 | 1916 | NASA 10.378GI | UNITED STATES | WHITE SANDS | | | D | | | | | | | | 81 | AIKIN, A. C.<br>GOLDBERG, R. A. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/13/71 | 1928 | NASA 10.379GI | UNITED STATES | WHITE SANDS | | | D | | | | | | | | 81 | AIKIN, A.C.<br>GOLDBERG, R.A. |
| 10/13/71 | 1959 | NASA 15.15 GI | UNITED STATES | WHITE SANDS | | | F | | | | | | | | 63 | AIKIN, A.C. |
| 10/16/71 | 0231 | A03.510-01 | UNITED STATES | WHITE SANDS | | | C | | | | | | | | 215 | O'NEIL, R.R. |
| 10/23/71 | 0345 | NASA 13.063 UG | UNITED STATES | WHITE SANDS | X | | | | | | | | | | N/A | GARMIRE, G.P. |
| 10/27/71 | 1004 | NASA 13.056 GG | UNITED STATES | WHITE SANDS | X | | | | | | | | | | N/A | SMITH, A.M. |
| 10/29/71 | 1009 | A04.004-05 | UNITED STATES | WHITE SANDS | E | | | | | | | | | | 158 | WALKER, R.W. |
| 11/03/71 | 1230 | A04.012-01 | UNITED STATES | WHITE SANDS | | X | | | | | | | | | 251 | TOOLIN, R.B. |
| 11/09/71 | 1900 | A03.002-03 | UNITED STATES | WHITE SANDS | | | | | | D<br>E | | | | | 219 | HIGGINS, J.E. |
| 11/09/71 | 1900 | A03.002-04 | UNITED STATES | WHITE SANDS | | | | | | D<br>E | | | | | 215 | MANSON, J.E. |
| 12/06/71 | 0300 | NASA 14.495 UM TH2-S342 | UNITED STATES | POINT BARROW | | B<br>C<br>F | | | | | | | | | N/A | THEON, J.S.<br>HORVATH, J.J. |
| 12/06/71 | 0302 | NASA 10.384GM TH2-S742 | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | THEON, J.S.<br>SMITH, W.S.<br>WRIGHT, D.U., JR. |
| 12/06/71 | 0430 | NASA 14.496 UM TH2-S343 | UNITED STATES | POINT BARROW | | B<br>C<br>F | | | | | | | | | N/A | THEON, J.S.<br>HORVATH, J.J. |
| 12/06/71 | 0442 | NASA 14.497 UM TH2-S344 | UNITED STATES | POINT BARROW | | B<br>C<br>F | | | | | | | | | N/A | THEON, J.S.<br>HORVATH, J.J. |
| 12/06/71 | 0752 | NASA 14.498 UM TH2-S345 | UNITED STATES | POINT BARROW | | B<br>C<br>F | | | | | | | | | N/A | THEON, J.S.<br>HORVATH, J.J. |
| 12/06/71 | 0802 | NASA 10.385GM TH2-S743 | UNITED STATES | POINT BARROW | | Z | | | | | | | | | N/A | THEON, J.S.<br>SMITH, W.S.<br>WRIGHT, D.U., JR. |

| DATE (UT) | TIME (UT) | ROCKET NUMBER OR TYPE | SPONSORING COUNTRY | LAUNCHING SITE | EXPERIMENTS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | APPROX. APOGEE (KM) | PRINCIPAL EXPERIMENTER(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/06/71 | 1041 | NASA 10.392GM TH2-6741 | UNITED STATES | POINT BARROW | | G | | | | | | | | | N/A | HILSENRATH, E.<br>HENDERSON, W.<br>HORVATH, J. J. |
| 12/06/71 | 1130 | NASA 10.394GM | UNITED STATES | POINT BARROW | | G | | | | | | | | | N/A | HILSENRATH, E. |

# SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

CORNELL UNIVERSITY
ITHACA, NEW YORK 14850
UNITED STATES

UNIVERSITY OF TOKYO
GEOPHYSICS RESEARCH LABORATORY
MEGURO-KU
TOKYO, JAPAN

DR. JULES AARONS
RADIO ASTRONOMY BRANCH, CODE CRL/LIR
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. A. P. J. ABDUL KALAM
THUMBA EQUATORIAL ROCKET LAUNCHING STATION
THUMBA (TRIVANDRUM), INDIA

MR. K. ABIKO
YOKOGAWA-HEWLETT-PACKARD, LTD.
HACHIOJI
TOKYO, JAPAN

MR. C. ACCARDO
GEOPHYSICS CORP. OF AMERICA
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. M. ACKERMAN
INSTITUTE OF SPACE AERONOMY
3, AVENUE CIRCULAIRE
BRUSSELS 18, BELGIUM

DR. LOREN W. ACTON
LOCKHEED PALO ALTO RESEARCH LABORATORY
LOCKHEED MISSILES AND SPACE COMPANY
3251 HANOVER STREET
PALO ALTO, CALIFORNIA 94304
UNITED STATES

DR. D. J. ADAMS
LEICESTER UNIVERSITY
UNIVERSITY ROAD
LEICESTER LE1 7RH, ENGLAND

MR. D. ADAMSON
NASA LANGLEY RESEARCH CENTER
MS 160T
HAMPTON, VIRGINIA 23365
UNITED STATES

MR. HOWARD I. ADLER
OAK RIDGE NATIONAL LABORATORY
PO BOX X
OAK RIDGE, TENNESSEE 37831
UNITED STATES

DR. THOMAS L. AGGSON
CODE 645
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. MOHAMMAD SHAFI AHMAD
PAKISTAN SPACE AND UPPER ATMOSPHERE RESEARCH COMMITTEE
PO BOX 3125
KARACHI 29, PAKISTAN

DR. ARTHUR C. AIKIN, JR.
CODE 625
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. JOHN E. AINSWORTH
ADDRESS UNKNOWN

MR. M. AKAMATSU
ADDRESS UNKNOWN

MR. K. AKITA
FUJI RESEARCH INSTITUTE OF JAPAN
TOKYO, JAPAN

MR. M. AKUTAGAWA
MEISEI ELECTRICAL COMPANY
KAMAKURA, JAPAN

MR. R. ALBERT
ADDRESS UNKNOWN

# SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. JAMES S. ALBUS
CODE 711
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. W. M. ALEXANDER
BAYLOR UNIVERSITY
WACO, TEXAS 76703
UNITED STATES

MR. JOSEPH K. ALEXANDER, JR.
CODE 693
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. H. ALLEN
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48105
UNITED STATES

MR. RAYMOND F. ALLEN
CODE 564
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

R. ALMOND
HIGH ATMOSPHERE RESEARCH BRANCH
METEOROLOGICAL OFFICE
LONDON ROAD
BRACKNELL GR12 2SZ, BERKS, ENGLAND

AMERICAN SCIENCE AND ENGINEERING,
INCORPORATED
11 CARLTON STREET
CAMBRIDGE, MASSACHUSETTS 02138
UNITED STATES

MR. J. G. ANDERSON
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

MR. R. C. ANDERSON
ADDRESS UNKNOWN

PROF. KINSEY A. ANDERSON
SPACE SCIENCES LABORATORY
UNIVERSITY OF CALIFORNIA, BERKELEY
BERKELEY, CALIFORNIA 94720
UNITED STATES

MR. T. ANDO
ADDRESS UNKNOWN

DR. CLIFFORD D. ANGER
DEPARTMENT OF PHYSICS
UNIVERSITY OF CALGARY
CALGARY, ALBERTA, CANADA

DR. IWAO AOYAMA
LABORATORY OF SPACE SCIENCE
TOKAI UNIVERSITY
2-28 TOMIGAYA, SIBUYAKU
TOKYO, JAPAN

MR. IWAO AOYAMA
AERONAUTICS AND ASTRONAUTICS INSTITUTE
TOKAI UNIVERSITY
HIRATSUKA, JAPAN

MR. R. ARIMA
ADDRESS UNKNOWN

MR. N. ARIZUMI
JAPAN METEOROLOGICAL AGENCY
OTE-MACHI
CHIYODA-KU
TOKYO 100, JAPAN

MR. R. ARMSTRONG
ADDRESS UNKNOWN

DR. ROGER L. ARNOLDY
PHYSICS DEPARTMENT
DEMERITT HALL
UNIVERSITY OF NEW HAMPSHIRE
DURHAM, NEW HAMPSHIRE 03824
UNITED STATES

MR. R. ARSNES
ADDRESS UNKNOWN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. T. ASHENFELTER
AIR FORCE CAMBRIDGE RESEARCH LABS
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. S. ASHIDA
MEISEI DENKI COMPANY, LIMITED
MEGURO-KU, TOKYO, JAPAN

MR. T. ASHINA
HITACHI CO., LTD.
TOTSUKA, YOKOHAMA, JAPAN

MR. R. ASHIYA
SPACE SCIENCE AND TECHNOLOGY CENTER
TRIVANDRUM, INDIA

DR. T. ASO
IONOSPHERE RESEARCH LABORATORY
KYOTO UNIVERSITY
UJI, KYOTO, JAPAN

DR. T. ASOH
DEPARTMENT OF ELECTRONICS
KYOTO UNIVERSITY
KYOTO, JAPAN

MR. F. H. ATTIX
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. W. E. AUSTIN
NAVAL RESEARCH LABORATORY
WASHINGTON, DC

MR. A. AZCARRAGA
INSTITUTE OF TECHNICAL AEROSPACE
MADRID, SPAIN

DR. A. BAHNSEN
DANISH SPACE RESEARCH INSTITUTE
LUNDLOFTEVEJ 7
2800 LYNGBY, DENMARK

MR. C. BAHNSEN
ADDRESS UNKNOWN

MR. S. H. BAIGUNI
LAPAN SPACE CENTER
TJILILITAN INDONESIA

MR. G. S. BALAYAN
COMMISSION ON EXPLORATION AND USE OF OUTER SPACE
UL VAVILOVA 32
MOSCOW V-312, U.S.S.R.

MR. FRANK T. BARATH
JET PROPULSION LABORATORY
MS 183-701
4800 OAK GROVE DRIVE
PASADENA, CALIFORNIA 91103
UNITED STATES

MR. M. B. BARNES
ROYAL AIRCRAFT ESTABLISHMENT
FARNBOROUGH, HANTS, ENGLAND

DR. R. E. BARRINGTON
COMMUNICATIONS RESEARCH CENTRE
DEPARTMENT OF COMMUNICATIONS
SHIRLEY BAY, PO BOX 490, STATION 'A'
OTTAWA 2, ONTARIO K1N 8T5, CANADA

DR. CHARLES A. BARTH
ATMOSPHERIC AND SPACE PHYSICS LABORATORY
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

MR. J. D. F. BARTOE
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. BRIAN BATES
PHYSICS DEPARTMENT
QUEEN'S UNIVERSITY
UNIVERSITY ROAD
BELFAST, NORTHERN IRELAND

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. SIEGFRIED J. BAUER
CODE 620.0
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. ROBERT C. BAUMANN
CODE 720
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. JOHN F. BEDINGER
SPACE SCIENCE LABORTORY
GEOPHYSICS CORPORATION OF AMERICA
BURLINGTON ROAD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. M. BEGHIN
NATIONAL SCIENTIFIC RESEARCH CENTER
GROUPE DE RECHERCHES IONOSPHERIQUES
VERRIERES-LE-BUISSON, FRANCE

DR. WILLIAM E. BEHRING
CODE 683
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. JOHN S. BELROSE
COMMUNICATIONS RESEARCH CENTER
DEPARTMENT OF COMMUNICATIONS
SHIRLEY BAY, PO BOX 490, STATION 'A'
OTTAWA, ONTARIO K1N 8T5, CANADA

MR. MICHAEL A. BENDER
OAK RIDGE NATIONAL LABORATORY
PO BOX X
OAK RIDGE, TENNESSEE 37831
UNITED STATES

MR. HENRY B. BENTON
CODE 623
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. W. J. G. BENYON
ADDRESS UNKNOWN
CARDIFF, WALES

MR. BERAN
ADDRESS UNKNOWN

MR. OTTO E. BERG
CODE 641
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. W. W. BERNING
BALLISTIC RESEARCH LABORATORY
US ARMY ABERDEEN PROVING GROUND
ABERDEEN, MARYLAND 21005
UNITED STATES

MR. WILLIAM BERNSTEIN
NOAA ENVIRONMENTAL RESEARCH
LABORATORIES
ROOM 3050
BOULDER, COLORADO 80302
UNITED STATES

DR. DAVID L. BERTSCH
CODE 662
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. G. T. BEST
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

PROF. W. J. G. BEYNON
DEPARTMENT OF PHYSICS
UNIVERSITY COLLEGE OF WALES
PENGLAIS, ABERYSTWYTH, CARDS., WALES

DR. P. D. BHAVSAR
PHYSICAL RESEARCH LABORATORY
NAVRANGPURA
AHMEDABAD-9, INDIA

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. S. BISWAS
TATA INSTITUTE OF FUNDAMENTAL RESEARCH
NATIONAL CENTRE OF GOVERNMENT OF INDIA
FOR NUCLEAR SCIENCE + MATHEMATICS
COLABA, BOMBAY 5, INDIA

MR. R. L. BLAKE
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. J. E. BLAMONT
ADDRES UNKNOWN

DR. ROBERT C. BLESS
STERLING HALL
UNIVERSITY OF WISCONSIN
MADISON, WISCONSIN 53706
UNITED STATES

MR. L. BLOCK
USAF CAMBRIDGE RESEARCH LABORATORIES
L.G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. L. J. BLUMLE
ADDRESS UNKNOWN

DR. ALBERT BOGGESS, III
CODE 672
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. BOHM
ADDRESS UNKNOWN

DR. A. BOKSENBERG
PHYSICS DEPARTMENT
UNIVERSITY COLLEGE LONDON
GOWER STREET
LONDON WC1, ENGLAND

DR. ELIHU A. BOLDT
CODE 661
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. E. BOLT
ADDRESS UNKNOWN

MR. F. R. BOND
ANTARTIC DIVISION
DEPARTMENT OF SUPPLY
568 ST KILDA RD
MELBOURNE VIC, 3004, AUSTRALIA

MR. K. BORGNE
INSTITUTE OF SPACE AND AERONAUTICAL
SCIENCE
UNIVERSITY OF TOKYO
MEGURO-KU, TOKYO, JAPAN

MR. ROBERT E. BOURDEAU
CODE 400
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. L. BOURDILLON
DUDLEY OBSERVATORY
100 FULLER ROAD
ALBANY, NEW YORK 12205
UNITED STATES

MR. I. A. BOURNE
ADDRESS UNKNOWN

DR. P. J. BOWEN
DEPARTMENT OF PHYSICS
MULLARD SPACE SCIENCE LABORATORY
HOLMBURY, ST. MARY
DORKING, SURREY, ENGLAND

PROF. SIDNEY A. BOWHILL
DEPARTMENT OF ELECTRICAL ENGINEERING
UNIVERSITY OF ILLINOIS
URBANA, ILLINOIS 61801
UNITED STATES

DR. J. A. BOWLES
MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC
EXPERIMENTS USING SOUNDING ROCKETS

DR. STUART BOWYER
DEPARTMENT OF ASTRONOMY
UNIVERSITY OF CALIFORNIA, BERKELEY
BERKELEY, CALIFORNIA 94720
UNITED STATES

DR. R. L. F. BOYD
DEPARTMENT OF PHYSICS
UNIVERSITY COLLEGE LONDON
GOWER STREET
LONDON WC1, ENGLAND

MR. C. H. BRACE
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

MR. LARRY H. BRACE
CODE 621
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. D. BRADLEY
QUEEN'S UNIVERSITY OF BELFAST
BELFAST 7, IRELAND

MR. D. F. BRADSHAW
BALL BROTHERS RESEARCH CORP.
PO BOX 1062
BOULDER, COLORADO 80302
UNITED STATES

DR. H. BRADT
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASSACHUSETTS 02139
UNITED STATES

MR. GEORGE W. BRANDON, JR.
CODE TG-6
NASA MANNED SPACECRAFT CENTER
HOUSTON, TEXAS 77058
UNITED STATES

DR. H. BRAUNIGER
ASTRONOMICAL INSTITUTE
UNIVERSITY OF TUBINGEN
WALCHAUSERSTR. 64, 74 TUBINGEN,
FED. REP. OF GERMANY

DR. H. BREDOHL
INSTITUTE FOR SPACE AERONOMY
3, AVENUE CIRCULAIRE
BRUSSELS 18, BELGIUM

PROF. D. BRINI
NATIONAL RESEARCH COUNCIL
LAB. DI TE.S.R.E.
VIA DE CASTAGNOLI 1
40126 BOLOGNA, ITALY

MR. HENRY C. BRINTON
CODE 621
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. A. L. BROADFOOT
KITT PEAK NATIONAL OBSERVATORY
PO BOX 4130
TUCSON, ARIZONA 85717
UNITED STATES

PROF. LUIGI BROGLIO
NATIONAL RESEARCH COUNCIL OF ITALY
SCUOLA D'INGEGNERIA AERONAUTICA
VIA EUDOSSIANA 18
ROME, ITALY

DR. G. BROMMUNDT
UNIVERSITY OF HEIDELBERG
PHILOSOPHENWEG 12
69 HEIDELBERG 1, FED. REP. OF GERMANY

DR. D. BROOKS
UNIVERSITY OF MONTREAL
MONTREAL, QUEBECK, CANADA

MR. P. BROSS
ADDRESS UNKNOWN

MR. W. E. BROWN
JET PROPULSION LABORATORY
4800 OAK GROVE DRIVE
PASADENA, CALIFORNIA 91103
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC
EXPERIMENTS USING SOUNDING ROCKETS

DR. GUENTER E. BRUECKNER
SPACE SCIENCE DIVISION, CODE 7142
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. ELMO C. BRUNER, JR.
LABORATORY FOR ATMOSPHERIC AND SPACE PHYSICS
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

MR. P. BRUSTON
ADDRESS UNKNOWN

DR. D. A. BRYANT
SCIENCE RESEARCH COUNCIL
RADIO AND SPACE RESEARCH STATION
DITTON PARK, SLOUGH, BUCKS. ENGLAND

MR. EMIL E. BUDZINSKI
NATIONAL RESEARCH COUNCIL
100 SUSSEX DRIVE
OTTAWA 1, ONTARIO, CANADA

MR. W. R. BULLOCK
BRISTOL AEROSPACE LTD.
WINNIPEG, MAINTOBA, CANADA

DR. K. BULLOUGH
DEPARTMENT OF PHYSICS
UNIVERSITY OF SHEFFIELD
SHEFFIELD, ENGLAND

MR. A. BUNNER
UNIVERSITY OF WISCONSIN
MADISON, WISCONSIN 53706
UNITED STATES

MR. P. BURBANK
ADDRESS NOT PROVIDED

MR. F. G. BURGER
WEAPONS RESEARCH ESTABLISHMENT
GPO BOX 1424H
ADELAIDE 5001, AUSTRALIA

MR. W. BURKE
GEOPHYSICAL CORPORATION OF AMERICA
BURLINGTON ROAD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. KEITH BURROWS
SCIENCE RESEARCH COUNCIL
RADIO AND SPACE RESEARCH STATION
DITTON PARK
SLOUGH 24411, BUCKS. ENGLAND

MR. W.M. BURTON
ASTROPHYSICS RESEARCH
CULHAM, ABINGTON, BERKS, ENGLAND

MR. JON R. BUSSE
CODE 744.1
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. H. E. BUTLER
ROYAL OBSERVATORY
BLACKFORD HILL
EDINBURGH EH9 3HJ, SCOTLAND

MR. E. T. BYRAM
CODE 7126
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. F. N. BYRNE
DEPARTMENT OF APPLIED MATHEMATICS
QUEEN'S UNIVERSITY OF BELFAST
BELFAST BT7 1NN, IRELAND

DR. LAURENCE J. CAHILL, JR.
SPACE SCIENCE CENTER
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

DR. WYNN CALVERT
NOAA RESEARCH LABORATORIES
BOULDER, COLORADO 80302
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. F. CAMBOU
FACULTE' DES SCIENCE
TOULOUSE, FRANCE

MR. CAMPEN
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. J. H. CANTER
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. G. R. CARIGNAN
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

MR. C. CARLSON
UNIVERSITY OF CALIFORNIA, BERKELEY
BERKELEY, CALIFORNIA 94720
UNITED STATES

DR. RALPH F. CARNEVALE
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. G. R. CARRUTHERS
CODE 7124.3
US NAVAL RESEARCH LABORATORY
WASHINGTON, D.C. 20390
UNITED STATES

MR. D. J. CARTWRIGHT
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

MR. D. S. CARTWRIGHT
COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION
MELBOURNE, AUSTRALIA

PROF. J. H. CARVER
DEPARTMENT OF PHYSICS
UNIVERSITY OF ADELAIDE
ADELAIDE 5000, AUSTRALIA

MR. CHARLES W. CHAGNON
AERONOMY LABORATORY, CODE LKO
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. R. K. CHAIMSON
US NAVAL RESEARCH LABORATORY
4555 OVERLOCK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. KENNETH S. W. CHAMPION
AERONOMY LABORATORY, CODE CRL/LKB
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. M. L. CHANIN
NATIONAL CENTER FOR TELECOMMUNICATIONS STUDIES
3 AVENUE DE LA REPUBLIQUE
ISSY-LES-MOLINEAUX, FRANCE

MR. L. M. CHASE
UNIVERSITY OF CALIFORNIA, BERKELEY
BERKELEY, CALIFORNIA 94720
UNITED STATES

CHIEF
OBSERVATION DIVISION
JAPAN METEOROLOGICAL AGENCY
OTE-MACHI, CHIYODA-KU
TOKYO 100, JAPAN

MR. H. CHIELMETTI
NATIONAL COSMIC RADIATION CENTER
PERU 272
BUENOS AIRES, ARGENTINA

MR. P. CHIN
UNIVERSITY OF TORONTO
TORONTO, ONTARIO, CANADA

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

PROF. E. V. CHITNIS
PHYSICAL RESEARCH LABORATORY
INDIAN SPACE RESEARCH ORGANIZATION
NAVRANGPURA
AHMEDABAD-9, GUJARAT, INDIA

MR. S. A. CHREST
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. P. CHRISTOPHERSEN
KIRUNA GEOPHYSICAL OBSERVATORY
KIRUNA C, SWEDEN

DR. TALBOT A. CHUBB
SPACE SCIENCE DIVISION, CODE 7120
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. EDWARD L. CHUPP
PHYSICS DEPARTMENT
DEMERITT HALL
UNIVERSITY OF NEW HAMPSHIRE
DURHAM, NEW HAMPSHIRE 03824
UNITED STATES

MR. G. CIOUTIER
ADDRESS UNKNOWN

DR. THOMAS L. CLINE
CODE 661
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. G. G. CLOUTIER
UNIVERSITY OF MONTREAL
MONTREAL, QUEBEC, CANADA

DR. ARTHUR CODE
WASHBURN OBSERVATORY
UNIVERSITY OF WISCONSIN
MADISON, WISCONSIN 53706
UNITED STATES

MR. H. A. COHEN
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. FRANCIS M. COLLINS, JR.
CODE 721
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. J. CONLEY
BALLISTIC RESEARCH LABORATORY
US ARMY ABERDEEN PROVING GROUND
ABERDEEN, MARYLAND 21005
UNITED STATES

MR. C. L. COOK
WEAPONS RESEARCH ESTABLISHMENT
GPO BOX 1424H
ADELAIDE 5001, AUSTRALIA

DR. B. A. COOKE
LEICESTER UNIVERSITY
UNIVERSITY ROAD
LEICESTER LE1 7RH, ENGLAND

MR. JIMMY E. COOLEY
CODE 621
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. C. CORNELL
SANDIA LABORATORIES
ALBUQUERQUE, NM

MR. ELIAS L. CORPAS
NASA LEWIS RESEARCH CENTER
MS 2202
CLEVELAND, OHIO 44135
UNITED STATES

MR. B. D. CRAIG
BALL BROTHERS RESEARCH CORP.
PO BOX 1062
BOULDER, COLORADO 80302
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC
EXPERIMENTS USING SOUNDING ROCKETS

MR. W. J. CRUICKSHANK
BALLISTIC RESEARCH LABORATORY
US ARMY ABERDEEN PROVING GROUND
ABERDEEN, MARYLAND 21005
UNITED STATES

MR. A. M. CRUISE
MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

MR. C. CUNIFF
USAF CAMBRIDGE RESEARCH LABORATORIES
L.G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. DANIEL W. DAMBROW
ADDRESS UNKNOWN

DR. K. R. DAMON
SYRACUSE UNIVERSITY RESEARCH CORP.
PO BOX 26
SYRACUSE, NEW YORK 13210
UNITED STATES

MR. K. R. DAMON
AVCO CORPORATION
10700 EAST INDEPENDENCE
TULSA, OKLAHOMA 74116
UNITED STATES

DR. B. S. DANDEKAR
USAF CAMBRIDGE RESEARCH LABORATORIES
L.G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. EDWARD W. DANIELS
ARGONNE NATIONAL LABORATORY
9700 SOUTH CASS AVENUE
ARGONNE, ILLINOIS 60440
UNITED STATES

MR. WILLIAM M. DANIELS
CODE 626
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

PROF. A. V. DAROSA
STANFORD UNIVERSITY
STANFORD, CALIFORNIA 94305
UNITED STATES

MR. A. DAVE
UNIVERSITY OF CALIFORNIA, SAN DIEGO
LA JOLLA, CALIFORNIA 92037
UNITED STATES

MR. W. E. R. DAVIES
UNIVERSITY OF TORONTO
TORONTO, ONTARIO, CANADA

DR. ROBERT J. DAVIS
SMITHSONIAN ASTROPHYSICAL OBSERVATORY
60 GARDEN STREET
CAMBRIDGE, MASSACHUSETTS 02138
UNITED STATES

MR. LEO R. DAVIS
CODE 601.1
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

PROF. C. DE JAGER
LABORATORY FOR SPACE RESEARCH
BENELUXLAAN 21
UTRECHT, NETHERLANDS

DR. J. H. DE LEEUW
UNIVERSITY OF TORONTO
TORONTO, ONTARIO, CANADA

MR. A. H. DE RAGONE
TUCUMAN NATIONAL UNIVERSITY
LA RIOJA, ARGENTINA

MR. FREDERICK J. DE SERRES
OAK RIDGE NATIONAL LABORATORY
PO BOX X
OAK RIDGE, TENNESSEE 37831
UNITED STATES

MR. DEBUSK
FLORIDA STATE UNIVERSITY
TALLAHASSEE, FLORIDA 32306
UNITED STATES

# SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. DEBUSQUE
FLORIDA STATE UNIVERSITY
TALLAHASSEE, FLORIDA 32306
UNITED STATES

MR. S. S. DEGAONKAR
PHYSICAL RESEARCH LABORATORY
NAVRANGPURA
AHMEDABAD-9, INDIA

MR. M. DELABOUDINIERE
LAPAN SPACE CENTER
TJILILITAN INDONESIA

MR. J. H. DELEEUW
UNIVERSITY OF TORONTO
TORONTO, ONTARIO, CANADA

DR. S. S. DEOGAONKAR
PHYSICAL RESEARCH LABORATORY
NAVRANGPURA
AHMEDABAD-9, INDIA

MR. H. DERBLOM
ADDRESS UNKNOWN

MR. STEVE M. DERDEYN
CODE 662
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. J. N. DESAI
PHYSICAL RESEARCH LABORATORY
NAVRANGPURA
AHMEDABAD-9, INDIA

MR. C. R. DETWILER
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. DAVID F. DETWILER, JR.
CODE RED-RSB-VAS
NASA WALLOPS STATION
WALLOPS ISLAND, VIRGINIA 23337
UNITED STATES

MR. P. H. G. DICKENSON
SCIENCE RESEARCH COUNCIL
RADIO + SPACE RESEARCH STATION
DITTON PARK
SLOUGH.BUCKS. ENGLAND

PROF. WALTER E. DIEMINGER
MAX-PLANCK INSTITUTE FOR AERONOMY
PC BOX 20
3411 LINDAU/HARZ, FED. REP. OF GERMANY

MR. L. DIGGIN
ADDRESS UNKNOWN

DR. J. H DIJKSTRA
LABORATORY FOR SPACE RESEARCH
BENELUXLAAN 21
UTRECHT, NETHERLANDS

MR. RICHARD C. DILLON
NASA LEWIS RESEARCH CENTER
MS 500-309
CLEVELAND, OHIO 44135
UNITED STATES

DIRECTOR
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL GOVERNMENT BUILDINGS
BARRACK STREET
PERTH 6000, AUSTRALIA

DIRECTOR
CENTRAL AEROLOGICAL OBSERVATORY
PERVOMAISKAYA 7
DOLGO PRUDNAYA
MOSCOW, U.S.S.R.

MR. T. DOKE
INSTITUTE FOR NUCLEAR STUDY
UNIVERSITY OF TOKYO
TANASHI CITY, TOKYO, JAPAN

DR. T. M. DONAHUE
DEPARTMENT OF PHYSICS
UNIVERSITY OF PITTSBURGH
PITTSBURGH, PENNSYLVANIA 15213
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC
EXPERIMENTS USING SOUNDING ROCKETS

MR. JOHN L. DONLEY
CODE 440
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. BERTRAM D. DONN
CODE 691
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. E. B. DORLING
MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

MR. T. DOTE
ADDRESS UNKNOWN

MR. L. J. DRUMMOND
WEAPONS RESEARCH ESTABLISHMENT
GPO BOX 1424F
ADELAIDE 5001, AUSTRALIA

MR. MAURICE DUBIN
COMETARY PHYSICS AND SPECIAL PROJECTS
CODE SGM
NASA HEADQUARTERS
WASHINGTON, D.C. 20546
UNITED STATES

MR. J. DUGAN
DUDLEY OBSERVATORY
100 FULLER ROAD
ALBANY, NEW YORK 12205
UNITED STATES

MR. W. L. DUNHAM
FAIRCHILD-HILLER CORP.
1455 RESEARCH BUILDING
ROCKVILLE, MARYLAND 20850
UNITED STATES

MR. L. DUNKELMAN
CODE 673
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. N. DURGAPRASARD
ADDRESS UNKNOWN

MR. C. DYE
ADDRESS UNKNOWN

MR. G. DYER
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

PROF. P. EBERHARDT
PHYSICAL INSTITUTE
UNIVERSITY OF BERN
SIDLERSTRASSE 5
3000 BERN, SWITZERLAND

DR. D. R. ECKBERG
GENERAL ELECTRIC COMPANY
PO BOX 8555
PHILADELPHIA, PENNSYLVANIA 19101
UNITED STATES

PROF. HOWARD D. EDWARDS
SCHOOL OF AEROSPACE
GEORGIA INSTITUTE OF TECHNOLOGY
225 NORTH AVENUE, NW
ATLANTA, GEORGIA 30332
UNITED STATES

DR. ALV EGELAND
NORWEGIAN INSTITUTE OF COSMIC PHYSICS
PO BOX 1038, BLINDERN
OSLO 3, NORWAY

DR. M. EJIRI
INSTITUTE OF SPACE AND AERONAUTICAL
SCIENCE
UNIVERSITY OF TOKYO
KOMABA, MEGURO-KU, TOKYO, JAPAN

MR. C. E. ELLIS
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. G. ELWERT
UNIVERSITY OF TUBINGEN
TUBINGEN, FED. REP. OF GERMANY

DR. F. ENGSTROM
UNIVERSITY OF STOCKHOLM
TULEGATEN 41
STOCKHOLM 19, SWEDEN

MR. I. ETKIND
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. JAMES A. EUGSTER
UNIVERSITY OF BERN
SIDLERSTRASSE 5
3000 BERN, SWITZERLAND

DR. DAVID S. EVANS
SPACE DISTURBANCE LABORATORY
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
BOULDER, COLORADO 80302
UNITED STATES

DR. K. EVANS
SPACE RESEARCH GROUP, PHYSICS DEPT.
LEICESTER UNIVERSITY
UNIVERSITY ROAD
LEICESTER LE1 7RH, ENGLAND

MR. DENNIS EVANS
CODE 672.1
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. HAROLD E. EVANS
CODE 723
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. STEPHEN J. EVANS
CODE 615
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. A. C. FABIAN
MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

DR. ULF V. FAHLESON
DEPARTMENT OF PLASMA PHYSICS
ROYAL INSTITUTE OF TECHNOLOGY
S-100 44 STOCKHOLM 70, SWEDEN

MR. A. C. FAIRE
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. KARL GUNNE FALTHAMMAR
DIVISION OF PLASMA PHYSICS
ROYAL INSTITUTE OF TECHNOLOGY
S-100 44 STOCKHOLM 70, SWEDEN

DR. NEIL H. FARLOW
MS 204-3
PLANETOLOGY, CODE SSP
NASA AMES RESEARCH CENTER
MOFFETT FIELD, CALIFORNIA 94035
UNITED STATES

PROF. WILLIAM G. FASTIE
DEPARTMENT OF PHYSICS
JOHNS HOPKINS UNIVERSITY
CHARLES AND 34TH STREETS
BALTIMORE, MARYLAND 21218
UNITED STATES

MR. G. FAUCHER
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. J. F. FAUGERE
ADDRESS UNKNOWN
TECHNOLOGY
COMPLEXE AEROSPATIAL
31 TOULOUSE-LESPINET, FRANCE

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. C. FAYARD
NATIONAL CENTER FOR - TELECOMMUNICATIONS STUDIES
3 AVENUE DE LA REPUBLIQUE
ISSY-LES-MOLINEAUX, FRANCE

DR. H. FECHTIG
MAX-PLANCK-INSTITUTE FOR NUCLEAR PHYSICS
SAUPFERCHECKWEG, HEIDELBERG 1,
FED. REP. OF GERMANY

DR. A. V. FEDYNSKI
HYDROMETEOROLOGICAL SERVICE
ADDRESS NOT PROVIDED, U.S.S.R.

MR. JULES ANDREW FEJER
DEPARTMENT OF APPLIED ELECTROPHYSICS
UNIVERSITY OF CALIFORNIA, SAN DIEGO
LA JOLLA, CALIFORNIA 92037
UNITED STATES

MR. P. D. FELDMAN
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. G. FENTON
UNIVERSITY OF ADELAIDE
ADELAIDE, AUSTRALIA

DR. CARL E. FICHTEL
CODE 662
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. V. FIELDS
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. ROBERT C. FILZ
(CRFC)
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. F. FISHBACH
SPACE RESEARCH BUILDING
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48105
UNITED STATES

DR. PHILIP C. FISHER
DEPARTMENT 52-14, BUILDING 202
LOCKHEED PALO ALTO RESEARCH LABORATORY
3251 HANOVER STREET
PALO ALTO, CALIFORNIA 94304
UNITED STATES

MR. RICHARD A. FLAGE
NASA LEWIS RESEARCH CENTER
MS 500-119
CLEVELAND, OHIO 44135
UNITED STATES

MR. T. W. FLOWERDAY
GRADUATE RESEARCH CENTER OF THE SOUTHWEST
DALLAS, TEXAS 75221
UNITED STATES

DR. KRISTEN FOLKESTAD
NORWEGIAN DEFENCE RESEARCH ESTABLISHMENT
PO BOX 25
2007 KJELLER, LILLESTROM, NORWAY

MR. W. H. FOLLETT
BALL BROTHERS RESEARCH CORP.
PO BOX 1062
BOULDER, COLORADO 80302
UNITED STATES

DR. P. A. FORSYTH
CENTER FOR RADIO SCIENCE
UNIVERSITY OF WESTERN ONTARIO
LONDON, ONTARIO, CANADA

DR. LEO FOX
CODE RBD
NASA HEADQUARTERS
WASHINGTON, D.C. 20546
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC
EXPERIMENTS USING SOUNDING ROCKETS

DR. SIDNEY FOX
UNIVERSITY OF MIAMI
521 ANASTASIA AVENUE
CORAL GABLES, FLORIDA 33134
UNITED STATES

MR. D. F. FOX
ADDRESS UNKNOWN

MR. R. L. FOX
TRW SYSTEMS INCORPORATED
ONE SPACE PARK
REDONDO BEACH, CALIFORNIA 90278
UNITED STATES

MR. R. FRANCEY
ADDRESS UNKNOWN

PROF. LOUIS A. FRANK
DEPARTMENT OF PHYSICS AND ASTRONOMY
UNIVERSITY OF IOWA
IOWA CITY, IOWA 52240
UNITED STATES

DR. KERSTIN FREDGA
ADDRESS UNKNOWN

DR. HERBERT C. FRIEDMAN
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. R. FRITH
ADDRESS UNKNOWN

MR. GILBERT G. FRITZ
SPACE SCIENCE DIVISION, CODE 7125.2
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. KENNETH J. FROST
CODE 682
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. N. FUGONO
RADIO RESEARCH LABORATORIES
MINISTRY OF POSTS AND TELECOMM.
2-1, NUKUI-KITAMACHI 4-CHOME
KOGANEI-SHI, TOKYO, 184, JAPAN

MR. M. FUJII
DEPARTMENT OF INSTRUMENTATION
KOBE UNIVERSITY
KOBE, JAPAN

MR. N. FUJIOKA
DOSHISA UNIVERSITY
KYOTO, JAPAN

DR. K. FUJITANI
DEPARTMENT OF INSTRUMENTATION
KOBE UNIVERSITY
KOBE, JAPAN

MR. T. FUKUHARA
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. W. H. FUNK
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. GORDON P. GARMIRE
PHYSICS DEPARTMENT, CODE 320-47
CALIFORNIA INSTITUTE OF TECHNOLOGY
1201 EAST CALIFORNIA BOULEVARD
PASADENA, CALIFORNIA 91109
UNITED STATES

MR. D. L. GARRETT
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. WALTER J. GATES
CODE 682
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MISS MARY ESTER CAULDEN
OAK RIDGE NATIONAL LABORATORY
PO BOX X
OAK RIDGE, TENNESSEE 37831
UNITED STATES

MR. W. CENTER
ADDRESS UNKNOWN

PROF. W. GENTNER
MAX-PLANCK-INSTITUTE FOR PHYSICS AND ASTROPHYSICS
SAUPFERCHECKWEG
HEIDELBERG, FED. REP. OF GERMANY

DR. RICCARDO GIACCONI
AMERICAN SCIENCE AND ENGINEERING INCORPORATED
11 CARLTON STREET
CAMBRIDGE, MASSACHUSETTS 02142
UNITED STATES

MR. A. GIB DE BUSK
FLORICA STATE UNIVERSITY
TALLAHASSEE, FLORIDA 32306
UNITED STATES

DR. W. GIBBONS
RADIOASTRONOMY GROUP, PHYSICS DEPT.
UNIVERSITY OF SHEFFIELD
HICKS BUILDING
SHEFFIELD S3 7RH, ENGLAND

MR. GIESE
ADDRESS UNKNOWN

MR. D. J. GILMORE
UNIVERSITY COLLEGE LONDON
GOWER STREET
LONDON WC1, ENGLAND

MR. M. GIRAUD
NATIONAL CENTER FOR TELECOMMUNICATIONS STUDIES
3 AVENUE DE LA REPUBLIQUE
ISSY-LES-MOLINEAUX, FRANCE

DR. W. M. GLENCROSS
MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

MR. HAROLD GOLD
PROJECT MANAGER
NASA LEWIS RESEARCH CENTER
MS 3-5
CLEVELAND, OHIO 44135
UNITED STATES

DR. LEO GOLDBERG
HARVARD COLLEGE OBSERVATORY
CAMBRIDGE, MASSACHUSETTS 02138
UNITED STATES

DR. RICHARD A. GOLDBERG
CODE 625
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. D. GOLOMB
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. R. E. GOOD
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. C. V. GOODALL
UNIVERSITY OF BIRMINGHAM
EDGBASTON, BIRMINGHAM, ENGLAND

DR. P. GORENSTEIN
AMERICAN SCIENCE AND ENGINEERING INCORPORATED
11 CARLTON STREET
CAMBRIDGE, MASSACHUSETTS 02142
UNITED STATES

MR. E. GOTCH
ADDRESS UNKNOWN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. D. GREINER
UNIVERSITY OF CALIFORNIA, BERKELEY
BERKELEY, CALIFORNIA 94720
UNITED STATES

MR. R. H. GRENDA
UNIVERSITY OF TORONTO
TORONTO, ONTARIO, CANADA

MR. J. R. GRIFFIN
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. R. GRIFFITHS
SPACE RESEARCH GROUP, PHYSICS DEPT.
LEICESTER UNIVERSITY
UNIVERSITY ROAD
LEICESTER LE1 7RH, ENGLAND

MR. DAVID W. GRIMES
CODE 402.1
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. A. J. GROBECKER
US NAVAL RESEARCH LABORATORY
WASHINGTON, D.C. 20390
UNITED STATES

MR. GROSS
ADDRESS UNKNOWN

PROF. GERALD V. GROVES
PHYSICS DEPARTMENT
UNIVERSITY COLLEGE LONDON
GOWER STREET
LONDON WC1E 6BT, ENGLAND

MR. J. G. GUIDOTTI
CODE 743.1
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. I. S. GULLEDGE
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. S. C. GUPTA
SPACE SCIENCE + TECHNOLOGY CENTER
TRIVANDRUM, INDIA

MR. DONALD A. GURNETT
DEPARTMENT OF PHYSICS
UNIVERSITY OF IOWA
IOWA CITY, IOWA 52240
UNITED STATES

DR. HERBERT GURSKY
AMERICAN SCIENCE AND ENGINEERING
INCORPORATED
11 CARLTON STREET
CAMBRIDGE, MASSACHUSETTS 02142
UNITED STATES

DR. H. GUSH
DEPARTMENT OF PHYSICS
UNIVERSITY OF BRITISH COLUMBIA
VANCOUVER
BRITISH COLUMBIA, CANADA

MR. DONALD E. GUSS
ADDRESS UNKNOWN

MR. P. GUSTAFSON
(CREK)
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. JAMES E. GUTHRIE
CODE 693
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. W. H. HAAS
ASSN LUNAR AND PLANETARY OBSERVATORIES
NEW MEXICO STATE UNIVERSITY
PO BOX AZ
UNIVERSITY PARK, NEW MEXICO 88070
UNITED STATES

MR. A. HAASZ
UNIVERSITY OF TORONTO
TORONTO, ONTARIO, CANADA

MR. HABLICK
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

PROF. F. T. HADDOCK
RADIO ASTRONOMY OBSERVATORY
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

DR. GERHARD HAERENDEL
MAX PLANCK INSTITUTE FOR PHYSICS AND ASTROPHYSICS
8046 GARCHING B
MUNICH, FED. REP. OF GERMANY

MR. I. HAGASHINO
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. K. HAGIWARA
ADDRESS UNKNOWN

MR. Y. HAGIWARA
DEPARTMENT OF PHYSICS
RIKKYO UNIVERSITY
TOKYO, JAPAN

MR. L. HALE
ADDRESS UNKNOWN

DR. JAMES E. HALL
SCIENCE RESEARCH COUNCIL
RADIO AND SPACE RESEARCH STATION
DITTON PARK
SLOUGH, BUCKS, ENGLAND

DR. S. H. HALL
GEOPHYSICAL DEPARTMENT
IMPERIAL COLLEGE
LONDON SW7, ENGLAND

DR. KENNETH L. HALLAM
CODE 673
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. FREDERICK C. HALLBERG
CODE 683
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. D. S. HALLGREN
DUDLEY OBSERVATORY
100 FULLER ROAD
ALBANY, NEW YORK 12205
UNITED STATES

MR. R. A. HAMEL
BALL BROTHERS RESEARCH CORP.
PO BOX 1062
BOULDER, COLORADO 80302
UNITED STATES

MR. R. A. HAMILTON
HIGH ATMOSPHERE RESEARCH BRANCH
METEOROLOGICAL OFFICE
LONDON ROAD
BRACKNELL RG 12 2SZ, BERKS, ENGLAND

MR. M. HANIF
PAKISTAN SPACE AND UPPER ATMOSPHERE RESEARCH COMMITTEE
PO BOX 3125
KARACHI-29, PAKISTAN

MR. P. B. HANNA
QUEEN'S UNIVERSITY OF BELFAST
BELFAST, IRELAND

MR. MARION O. HANSEN
NASA AMES RESEARCH CENTER
MS 244-6
MOFFETT FIELD, CALIFORNIA 94035
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. W. H. HANSEN
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

DR. WILLIAM B. HANSON
DIVISION OF ATMOSPHERIC AND SPACE SCI
UNIVERSITY OF TEXAS AT DALLAS
PO BOX 30365
DALLAS, TEXAS 75230
UNITED STATES

MR. KAORU HARADA
FLORIDA STATE UNIVERSITY
TALLAHASSEE, FLORIDA 32306
UNITED STATES

MR. G. HARPELL
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. J. HARRI
SANDIA LABORATORIES
ALBUQUERQUE, NM

DR. JOHN R. HARRIES
DEPARTMENT OF PHYSICS
UNIVERSITY OF ADELAIDE
ADELAIDE 6001, AUSTRALIA

DR. A. W. HARRISON
DEPARTMENT OF PHYSICS
UNIVERSITY OF CALGARY
CALGARY, ALBERTA, CANADA

MR. R. HARVEY
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. M. O. HARWIT
US NAVAL RESEARCH LABORATORY
WASHINGTON, D.C. 20390
UNITED STATES

PROF MARTIN HARWIT
CORNELL UNIVERSITY
CLARK HALL
ITHACA, NEW YORK 14850
UNITED STATES

MR. S. HASEGAWA
ADDRESS UNKNOWN

MR. K. HASHIMOTO
DEPARTMENT OF ELECTRONICS
KYOTO UNIVERSITY
UJI, KYOTO, JAPAN

MR. M. HASHIMOTO
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
MEGURO-KU, TOKYO, JAPAN

MR. H. HATSUMI
ADDRESS UNKNOWN

MR. F. J. HAWKINS
MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

DR. S. HAYAKAWA
DEPARTMENT OF PHYSICS
NAGOYA UNIVERSITY
CHIKUSA-KU
NAGOYA, JAPAN

MR. M. HAYAKAWA
RESEARCH INSTITUTE OF ATMOSPHERICS
NAGOYA UNIVERSITY
NAGOYA, JAPAN

PROF. T. HAYASHI
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
KOMABA, MEGURO-KU, TOKYO, JAPAN

MR. J. HAYDEN
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

PROF. ROBERT C. HAYMES
DEPARTMENT OF SPACE SCIENCES
RICE UNIVERSITY
HOUSTON, TEXAS 77001
UNITED STATES

DR. P. B. HAYS
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

MR. HAZER
ADDRESS UNKNOWN

DR. DONALD F. HEATH
CODE 651
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. J. HECKSHER
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. W. HEDINE
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

PROF. WALTER J. HEIKKILA
DIVISION OF ATMOSPHERIC AND SPACE SCI
UNIVERSITY OF TEXAS AT DALLAS
PO BOX 30365
DALLAS, TEXAS 75230
UNITED STATES

MR. HEINRICH
ADDRESS UNKNOWN

MR. H. W. HEITMAN
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. CURTIS L. HEMENWAY
DIRECTOR
DUDLEY OBSERVATORY
100 FULLER ROAD
ALBANY, NEW YORK 12205
UNITED STATES

MR. H. HENDERSON
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
BOULDER, COLORADO 80302
UNITED STATES

MR. WATSON HENDERSON
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
BOULDER, COLORADO 80302
UNITED STATES

MR. JOHN P. HENNES
ADDRESS UNKNOWN

DR. R. C. HENRY
CODE 7122.11
US NAVAL RESEARCH LABORATORY
WASHINGTON, D.C. 20390
UNITED STATES

DR. JAMES P. HEPPNER
CODE 640
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. M. HERTZBERG
LOCKHEED MISSILE AND SPACE COMPANY
PALO ALTO, CA

DR. WILMOT N. HESS
CODE R
NOAA ENVIRONMENTAL RESEARCH LABORATORY
BOULDER, COLORADO 80302
UNITED STATES

DR. N. HESSBERG
MAX-PLANCK-INSTITUTE FOR PHYSICS AND ASTROPHYSICS
8046 GARCHING E.
MUNICH, FED. REP. OF GERMANY

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. K. HIGASHI
TOKYO ASTRONOMICAL OBSERVATORY
MITAKA
TOKYO, JAPAN

MR. M. HIGASHIMURA
RADIO RESEARCH LABORATORY
2-1, NUKUI-KITAMACHI 4-CHOME
KOGANEI-SHI, TOKYO 184, JAPAN

MR. I. HIGASHINO
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. JAMES E. HIGGINS
AERONOMY LABORATORY, CODE CRL/LKO
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. ERNEST HILSENRATH
CODE 651
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. HANS E. HINTEREGGER
AERONOMY LABORATORY, CODE CRL/LKO
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

PROF. KUNIO HIRAO
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
KOMABA, MEGURO-KU, TOKYO, JAPAN

MR. T. HIRASAWA
ADDRESS UNKNOWN

MR. K. HIRASHI
DEPARTMENT OF ELECTRONICS
KYOTO UNIVERSITY
KYOTO, JAPAN

DR. M. HIRONO
DEPARTMENT OF PHYSICS
KYUSHU UNIVERSITY
FUKUOKA 812, JAPAN

MR. H. HISADA
ADDRESS UNKNOWN

MR. Y. HISHIDA
HITACHI COMPANY, LIMITED
TOTSUKA, YOKOHAMA, JAPAN

DR. JOHN H. HOFFMAN
UNIVERSITY OF TEXAS AT DALLAS
PO BOX 30365
DALLAS, TEXAS 75230
UNITED STATES

DR. D. H. HOHN
INSTITUTE FOR THEORETICAL PHYSICS
UNIVERSITY OF TUBINGEN
WALDHAUSERSTR. 64, 74 TUBINGEN,
FED. REP. OF GERMANY

MR. J. C. HOLMES
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. STEPHEN HOLT
CODE 661
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. HERBERT J. HONECKER, JR.
CODE 721
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. RICHARD A. HORD
NASA LANGLEY RESEARCH CENTER
MS 242
HAMPTON, VIRGINIA 23365
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC
EXPERIMENTS USING SOUNDING ROCKETS

MR. RICHARD HOROWITZ
CODE 601.1
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. B. H. HORTON
UNIVERSITY OF ADELAIDE
ADELAIDE, AUSTRALIA

MR. JACK J. HORVATH
SPACE PHYSICS RESEARCH LABORATORY
UNIVERSITY OF MICHIGAN
2455 HAYWARD
ANN ARBOR, MICHIGAN 48103
UNITED STATES

MR. J. R. HOUCK
CORNELL UNIVERSITY
ITHACA, NEW YORK 14850
UNITED STATES

MR. T. HOUCK
UNIVERSITY OF WISCONSIN
MADISON, WISCONSIN 53706
UNITED STATES

MR. CHARLES P. HOULT
SYSTEMS ENGINEERING DIVISION
SPACE GENERAL COMPANY
9200 EAST FLAIR DRIVE
EL MONTE, CALIFORNIA 91734
UNITED STATES

DR. R. E. HOUSTON
UNIVERSITY OF NEW HAMPSHIRE
DURHAM, NEW HAMPSHIRE 03824
UNITED STATES

MR. R. HOWARD
SCHOOL OF PHYSICS
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MN 55455

MR. JOHN I. HUDGINS, JR.
CODE 721
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. ARTHUR R. W. HUGHES
PHYSICS DEPARTMENT
UNIVERSITY OF SHEFFIELD
SHEFFIELD, S3 7RH, ENGLAND

MR. J. HUGILL
NCAA RESEARCH LABORATORIES
BOULDER, COLORADO 80302.
UNITED STATES

DR. RICHARD HUGUENIN
HARVARD COLLEGE OBSERVATORY
CAMBRIDGE, MASSACHUSETTS 02138
UNITED STATES

DR. BENGT HULTQVIST
KIRUNA GEOPHYSICAL OBSERVATORY
98901 KIRUNA, SWEDEN

DR. C. M. HUMPHRIES
ROYAL OBSERVATORY
BLACKFORD HILL
EDINBURGH EH9 3HJ, SCOTLAND

DR. D. M. HUNTEN
SPACE DIVISION
KITT PEAK NATIONAL OBSERVATORY
PO BOX 4130
TUCSON, ARIZONA 85717
UNITED STATES

MR. R. HUNTER
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

PROF. MASAAKI HURUHATA
TOKYO ASTRONOMICAL OBSERVATORY
UNIVERSITY OF TOKYO
OSAWA, MITAKA
TOKYO 181, JAPAN

MR. ROBERT O. HUTCHINSON
SPACE PHYSICS LABORATORY, CODE PHG
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. T. ICHIKAWA
GIFU UNIVERSITY
GIFU, JAPAN

MR. T. ICHIMIYA
ADDRESS UNKNOWN

MR. T. ICHINOSE
DOSHISHA UNIVERSITY
ADDRESS UNKNOWN JAPAN

MR. G. IGLESIAS
LABORATORY OF COSMIC RADIATION
NATIONAL UNIVERSITY OF TUCUMAN
AYACUCHO 482
SAN MIGUEL DE TUCUMAN, ARGENTINA

MR. I. IIZUKA
SOKKISHA COMPANY
TOKYO, JAPAN

MR. T. IMAGAWA
FACULTY OF ENGINEERING
OSAKA UNIVERSITY
YAMADA-UE, SUITA
OSAKA, JAPAN

DR. T. IMAI
INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH
UNIVERSITY OF TOKYO
MEGURO-KU, TOKYO, JAPAN

MR. M. F. INGHAM
DEPARTMENT OF ASTROPHYSICS
OXFORD OBSERVATORY
SOUTH PARKS ROAD
OXFORD, ENGLAND

INSTITUTE OF EXPERIMENTAL METEOROLOGY
USSR
ADDRESS NOT PROVIDED, U.S.S.R.

IONOSPHERIC INSTITUTE
D-7814 BREISACH AM RHEIN,
FED. REP. OF GERMANY

MR. H. IRIE
OSAKA OENPA COMPANY LIMITED
OSAKA, JAPAN

MR. A. IWAI
RESEARCH INSTITUTE OF ATMOSPHERICS
NAGOYA UNIVERSITY
NAGOYA, JAPAN

MR. T. IWAMI
ADDRESS UNKNOWN

MR. M. IWANAGA
ADDRESS UNKNOWN

MR. Y. IWASAKA
GEOPHYSICAL INSTITUTE
TOHOKU UNIVERSITY
SENDAI, JAPAN

MR. S. IWASAKI
NUCLEAR ELECTRONICS AND SYSTEMS CORP.
TOKYO, JAPAN

MR. T. IWASAKI
ADDRESS UNKNOWN

MR. Y. IZAWA
INDUSTRIAL RESEARCH INSTITUTE
ENOKOJIMA-KAMINO
NISHI-KU, OSAKA, JAPAN

MR. JOHN E. JACKSON
CODE 625
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. K. G. JACOBS
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

DR. RUDOLF JAESCHKE
IONOSPHERIC PHYSICS DIVISION
SPACE SCIENCE DEPARTMENT
EUROPEAN SPACE RESEARCH ORGANIZATION
DOMEINWEG, NOORDWIJK, NETHERLANDS

MR. S. A. JAFRI
PAKISTAN SPACE AND UPPER ATMOSPHERE RESEARCH COMMITTEE
PO BOX 3125
KARACHI-29, PAKISTAN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. A. F. JANES
LEICESTER UNIVERSITY
UNIVERSITY ROAD
LEICESTER LE1 7RH, ENGLAND

MR. J. T. JEFFRIES
UNIVERSITY OF HAWAII
HONOLULU, HAWAII 96822
UNITED STATES

MR. W. JEFFRIES
UNIVERSITY OF HAWAII
HONOLULU, HAWAII 96822
UNITED STATES

MR. REED B. JENKINS
CODE 621
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. J. JENSEN
ROYAL NORWEGIAN COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH
SPACE ACTIVITY DIVISION
OSLO, NORWAY

DR. ROBERT JEPSON
VARIAN ASSOCIATES
611 HANSEN WAY
PALO ALTO, CALIFORNIA 94303
UNITED STATES

MR. M. JESPERSEN
DANISH SPACE RESEARCH INSTITUTE
LYNGBY DIVISION
LUNDTOFTEVEJ 7, 2800 LYNGBY
COPENHAGEN, DENMARK

MR. A. JOHANNESSEN
NORWEGIAN DEFENCE RESEARCH ESTABLISHMENT
PO BOX 25
2007 KJELLER, LILLESTROM, NORWAY

MR. C. Y. JOHNSON
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. W. G. JOHNSON
ADDRESS UNKNOWN

MR. A. D. JOHNSTONE
UNIVERSITY OF ALASKA
COLLEGE, ALASKA 99701
UNITED STATES

DR. A. VALLANCE JONES
RADIO AND ELECTRICAL ENGINEERING DIV
NATIONAL RESEARCH COUNCIL
100 SUSSEX DRIVE
OTTAWA 1, ONTARIO, CANADA

MR. A. V. JONES
UNIVERSITY OF SASKATCHEWAN
SASKATOON, SASKATCHEWAN, CANADA

MR. B. JONES
CULHAM LABORATORY
CULHAM, ENGLAND

MR. BILLY P. JONES
CODE S AND E-SSL-TT
NASA MARSHALL SPACE FLIGHT CENTER
MARSHALL SPACE FLIGHT CENTER,
ALABAMA 35812
UNITED STATES

PROF. LESLIE M. JONES
DEPARTMENT OF AEROSPACE ENGINEERING
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

DR. ROGER J. R. JUDGE
DEPARTMENT OF PHYSICS
UNIVERSITY OF CALIFORNIA, SAN DIEGO
LA JOLLA, CALIFORNIA 92037
UNITED STATES

MR. A. JURSA
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. C. G. JUSTUS
ADDRESS UNKNOWN

MR. S. KAINUMA
ADDRESS UNKNOWN

MR. P. KAISER
IONOSPHERE INSTITUTE
7814 BREISACH AM RHEIN,
FED. REP. OF GERMANY

PROF. T. R. KAISER
RADIOASTRONOMY GROUP, PHYSICS DEPT.
UNIVERSITY OF SHEFFIELD
HICKS BUILDING
SHEFFIELD S3 7RH, ENGLAND

MR. K. KAJIYAMA
HITACHI COMPANY, LIMITED
TOTSUKA, YOKOHAMA, JAPAN

MR. T. KAMADA
RESEARCH INSTITUTE OF ATMOSPHERICS
NAGOYA UNIVERSITY
TOYOKAWA, AICHI, NAGOYA, JAPAN

DR. JOSEPH A. KANE
CODE 625
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. T. KANETO
ADDRESS UNKNOWN

MR. KAPPLER
ADDRESS UNKNOWN

MR. S. KARACHI
ADDRESS UNKNOWN

MR. S. KARIYA
ADDRESS UNKNOWN

MR. T. KASHIWAGI
INSTITUTE OF OPTICAL RESEARCH
KYOIKU UNIVERSITY
TOKYO, JAPAN

MR. T. KASHIWARA
FACULTY OF ENGINEERING
OSAKA UNIVERSITY
YAMADA-UE, SUITA
OSAKA, JAPAN

MR. K. KATHIREL
SPACE SCIENCE AND TECHNOLOGY CENTER
TRIVANDRUM, INDIA

MR. H. KATO
INSTITUTE OF PHYSICAL AND CHEMICAL
RESEARCH
SAITAMA PREFECTURE
TOKYO, JAPAN

MR. K. KATO
NAGOYA UNIVERSITY
CHIKUSA, NAGOYA, JAPAN

MR. K. KATO
IONOSPHERE OBSERVATION LABORATORY
KYOTO UNIVERSITY
UJI, KYOTO, JAPAN

PROF. SUSUMU KATO
IONOSPHERE RESEARCH LABORATORY
KYOTO UNIVERSITY
UJI
KYOTO FU, JAPAN

MR. LUDWIG KATZ
SPACE PHYSICS LABORATORY, CODE PHE
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. ALEXANDER KAVADAS
SPACE ENGINEERING DIVISION
UNIVERSITY OF SASKATCHEWAN
SASKATOON, SASKATCHEWAN, CANADA

MR. S. KAWAGUCHI
ADDRESS UNKNOWN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. N. KAWASHIMA
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
MEGURO-KU, TOKYO, JAPAN

DR. P. S. KELLOGG
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

MR. EDWIN M. KELLOGG
AMERICAN SCIENCE AND ENGINEERING INCORPORATED
11 CARLTON STREET
CAMBRIDGE, MASSACHUSETTS 02142
UNITED STATES

MR. K. K. KELLY
ATMOSPHERIC AND SPACE PHYSICS LABORATORY
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

DR. B. R. KENDALL
PENNSYLVANIA STATE UNIVERSITY
UNIVERSITY PARK, PENNSYLVANIA 16802
UNITED STATES

DR. ERHARD KEPPLER
INSTITUTE FOR STRATOSPHERIC PHYSICS
MAX-PLANCK INSTITUTE FOR AERONOMY
3411 LINDAU/HARZ, FED. REP. OF GERMAN

MR. M. J. KERLEY
METEOROLOGICAL OFFICE
LONDON ROAD
BRACKNELL, BERKS, ENGLAND

PROF. JOHN W. KERN
DEPARTMENT OF PHYSICS
UNIVERSITY OF HOUSTON
3801 CULLEN BOULEVARD
HOUSTON, TEXAS 77004
UNITED STATES

MR. T. KIFUNE
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
MEGURO-KU, TOKYO, JAPAN

MR. J. KIKKAWA
OSAKA UNIVERSITY
YAMADA-UE, SUITA
OSAKA, JAPAN

MR. K. KIKUCHI
ADDRESS UNKNOWN

DR. IWANE KIMURA
DEPARTMENT OF ELECTRICAL ENGINEERING
KYOTO UNIVERSITY
YOSHIDA, SAKYOKU
KYOTO, JAPAN

MR. H. KIMURA
COLLEGE OF GENERAL EDUCATION
UNIVERSITY OF TOKYO
TOKYO, JAPAN

MR. WILLIAM H. KINARD
NASA LANGLEY RESEARCH CENTER
MS 225
HAMPTON, VIRGINIA 23365
UNITED STATES

MR. O. KING
SPACE CRAFT INCORPORATED
8620 MEMORIAL PARKWAY
HUNTSVILLE, ALABAMA 35801
UNITED STATES

MR. KIRSCH
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASSACHUSETTS 02139
UNITED STATES

MR. J. KISSEL
ADDRESS UNKNOWN

MR. T. KITAMURA
DEPARTMENT OF PHYSICS
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. D. KITROSSER
(CRAS)
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. N. KLEINSCHMIDT
ADDRESS UNKNOWN

DR. CHARLES F. KNAPP
WENNER-GREN RESEARCH LABORATORY
UNIVERSITY OF KENTUCKY
ROSE STREET
LEXINGTON, KENTUCKY 40506
UNITED STATES

MR. R. W. KNECHT
CENTRAL RADIO PROPULSION LABORATORY
BOULDER, COLORADO 80302
UNITED STATES

DR. DONALD KNIFFEN
CODE 662
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

SUMIO KOBANE
MEGURO LABORATORY
MEISEI DENKI COMPANY INCORPORATED
NO 3-8-3 KAMIOSAKI SHINAGANAKU
TOKYO, JAPAN

MR. T. KOBAYASHI
ADDRESS UNKNOWN

DR. J. A. KOEHLER
UNIVERSITY OF SASKATCHEWAN
SASKATOON, SASKATCHEWAN, CANADA

MR. Y. KOGA
ADDRESS UNKNOWN

MR. T. KOHNO
NAGOYA UNIVERSITY
FURO-CHO, CHIKUSA-KU
NAGOYA, JAPAN

MR. T. KOIZUMI
YOKOGAWA-HEWLETT PACKARD LIMITED
HACHIOJI
TOKYO, JAPAN

MR. I. KONDO
DEPARTMENT OF PHYSICS
NAGOYA UNIVERSITY
FURO-CHO, CHIKUSA-KU
NAGOYA, JAPAN

MR. S. KONDO
MITSUBISHI ELECTRIC COMPANY
INCORPORATED
KAMAKURA JAPAN

MR. Y. KONDO
ADDRESS UNKNOWN

MR. T. KONO
NAGOYA UNIVERSITY
CHIKUSA, NAGOYA, JAPAN

MR. MARTIN J. KOOMEN
SPACE SCIENCE DIVISION, CODE 7141-K
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. T. KOSEKI
ADDRESS UNKNOWN

MR. GEORGE E. KOWALSKE
CODE 721
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. GEORGE E. KRAFT
CODE 744.1
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. DIETER K. H. KRANKOWSKY
MAX-PLANCK INSTITUTE FOR NUCLEAR
PHYSICS
69 HEIDELBERG 1, FED. REP. OF GERMANY

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

PROF. WILLIAM L. KRAUSHAAR
PHYSICS DEPARTMENT
UNIVERSITY OF WISCONSIN
MADISON, WISCONSIN 53706
UNITED STATES

MR. ROBERT W. KREPLIN
SPACE SCIENCE DIVISION, CODE 7125
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. R. L. KRIEGER
DIRECTOR
NASA WALLOPS STATION
WALLOPS ISLAND, VIRGINIA 23337
UNITED STATES

MR. A. KRUEGER
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. ARLIN J. KRUEGER
CODE 651
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. T. KUBO
MITSUBISHI ELECTRIC COMPANY, LTD.
KAMAKURA, JAPAN

MR. T. KUBOI
MATSUSHITA COMMUNICATION INDUSTRIAL CO., LTD.
TSUNASHIMA, YOKOHAMA, JAPAN

DR. JAMES E. KUPPERIAN, JR.
CODE 400
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. K. KURASHI
RESEARCH INSTITUTE OF ATMOSPHERICS
NAGOYA UNIVERSITY
NAGOYA, JAPAN

MR. I. KURIKI
YAMAGAWA OBSERVATORY
RADIO RESEARCH LABORATORIES
TOKYO, JAPAN

DR. J. LABEYRIE
C.E.N., SACLAY
GIF-SUR-YVETTE, FRANCE

MR. H. E. LAGOW
CODE 300
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. P. LAMMERZAHL
ADDRESS UNKNOWN

MR. M. LAMPTON
SPACE SCIENCE LABORATORY
UNIVERSITY OF CALIFORNIA, BERKELEY
BERKELEY, CALIFORNIA 94720
UNITED STATES

MR. LANDENSPERGER
ADDRESS UNKNOWN

DR. BJORN LANDMARK
NORWEGIAN DEFENCE RESEARCH ESTABLISHMENT
PO BOX 25
KJELLER, LILLESTROM, NORWAY

MR. JOHN H. LANE
CODE 721.2
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. WADE E. LANFORD
NASA LANGLEY RESEARCH CENTER
MS 420
HAMPTON, VIRGINIA 23365
UNITED STATES

JAMES R. LEASE
CODE 721
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. F. S. LEBLANC
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. J. LEEDER
BALLISTIC RESEARCH LABORATORY
US ARMY ABERDEEN PROVING GROUND
ABERDEEN, MARYLAND 21005
UNITED STATES

MR. R. W. LENHARD
ADDRESS UNKNOWN

MR. E. LEWIS
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. L. E. LICHTENSTEIN
NATIONAL METEOROLOGICAL SERVICE
BUENOS AIRES, LA RIOJA, ARGENTINA

DR. D. L. LIND
ASTRONAUT OFFICE
NASA MANNED SPACECRAFT CENTER
CODE CB
HOUSTON, TEXAS 77058
UNITED STATES

DR. B. A. LINDBLAD
LUND OBSERVATORY
S-222 24 LUND, SWEDEN

MR. J. C. LINDSAY
ADDRESS UNKNOWN

MR. W. J. LINDSAY
933 PHYSICS ASTRONOMY BUILDING
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

MR. P. LIVINGSTON
CATHOLIC UNIVERSITY OF AMERICA
620 MICHIGAN AVENUE, NE
WASHINGTON, D.C. 20017
UNITED STATES

DR. EDWARD J. LLEWELLYN
INSTITUTE OF SPACE AND ATMOSPHERIC STUDIES
UNIVERSITY OF SASKATCHEWAN
SASKATOON, SASKATCHEWAN, CANADA

MR. WILLIAM LLOYD
VARIAN ASSOCIATES
611 HANSEN WAY
PALO ALTO, CALIFORNIA 94303
UNITED STATES

MR. R. LOCKWOOD
UNIVERSITY OF NEW HAMPSHIRE
DURHAM, NEW HAMPSHIRE 03824
UNITED STATES

PROF. JOHN A. LOCKWOOD
DEPARTMENT OF PHYSICS
UNIVERSITY OF NEW HAMPSHIRE
DURHAM, NEW HAMPSHIRE 03824
UNITED STATES

MR. A. LOPEZ
CUYO NATIONAL UNIVERSITY
FAC. DE INGENIERIA
SAN JUAN, ARGENTINA

MR. J. LOVETTE
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. CHARLES A. LUNDQUIST
ASSISTANT DIRECTOR
SMITHSONIAN ASTROPHYSICAL OBSERVATORY
60 GARDEN STREET
CAMBRIDGE, MASSACHUSETTS 02138
UNITED STATES

DR. REIMAR LVEST
MAX-PLANCK INSTITUTE FOR PHYSICS AND ASTROPHYSICS
FOHRINGER RING 6
8 MUNICH 23, FED. REP. OF GERMANY

MR. G. F. LYON
UNIVERSITY OF WESTERN ONTARIO
LONDON, ONTARIO, CANADA

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC
EXPERIMENTS USING SOUNDING ROCKETS

MR. MALCOLM A. MACLEOD
AERONOMY LABORATORY, CODE CRL/LKC
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. K. MAEDA
DEPARTMENT OF ELECTRONICS
FACULTY OF ENGINEERING
KYOTO UNIVERSITY
KYOTO, JAPAN

DR. BERNT N. MAEHLUM
NORWEGIAN DEFENCE RESEARCH
ESTABLISHMENT
PO BOX 25
2007 KJELLER, LILLESTROM, NORWAY

MR. H. MAHON
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. EUGENE J. MAIER
CODE 621
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. F. MAKINO
NAGOYA UNIVERSITY
TOYOKAWA, AICHI, NAGOYA, JAPAN

MR. T. MAKINO
DEPARTMENT OF PHYSICS
RIKKYO UNIVERSITY
TOKYO, JAPAN

DR. PHILLIP W. MANGE
SPACE SCIENCE DIVISION, CODE 7101
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. EDWARD R. MANRING
PHYSICS DEPARTMENT
UNIVERSITY OF NORTH CAROLINA
PO BOX 5342
RALEIGH, NORTH CAROLINA 27607
UNITED STATES

MR. J. E. MANSON
AERONOMY LABORATORY, CODE CRL/LK
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. JOSE R. MANZANO
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

MR. L. MARCOTTE
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. THOMAS P. MARKHAM
OPTICAL PHYSICS LABORATORY, CODE OPR
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. EDWARD A. MARTELL
NATIONAL CENTER FOR ATMOSPHERIC
RESEARCH
PO BOX 1470
BOULDER, COLORADO 80301
UNITED STATES

DR. G. MARTELLI
UNIVERSITY OF SUSSEX
BRIGHTON, ENGLAND

MR. FRANK T. MARTIN
CODE 723
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. JOHAN MARTIN-LOF
SPACE TECHNOLOGY GROUP
AB TELEPLAN
FACK, S-171 20 SOLNA, SWEDEN

MR. K. MASEIDE
ADDRESS UNKNOWN

MR. R. MASON
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

MR. T. MASUOKA
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

PROF. KEITH B. MATHER
GEOPHYSICAL INSTITUTE
UNIVERSITY OF ALASKA
COLLEGE, ALASKA 99701
UNITED STATES

MR. M. C. MATHUR
SPACE SCIENCE AND TECHNOLOGY CENTER
TRIVANDRUM, INDIA

MR. Y. MATSUI
HITACHI COMPANY LIMITED
TOTSUKA, YOKOHAMA, JAPAN

DR. H. MATSUMOTO
DEPARTMENT OF ELECTRONICS
KYOTO UNIVERSITY
KYOTO, JAPAN

DR. T. MATSUMOTO
DEPARTMENT OF PHYSICS
NAGOYA UNIVERSITY
CHIKUSA-KU
NAGOYA, JAPAN

MR. H. MATSUMOTO
DEPARTMENT OF INSTRUMENTATION
KOBE UNIVERSITY
KOBE, JAPAN

MR. M. MATSUOKA
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
KOMABA, MEGURO-KU, TOKYO, JAPAN

MR. T. MATSUOKA
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. T. MATSUOKA
COLLEGE OF GENERAL EDUCATION
UNIVERSITY OF TOKYO
KOMABA, 3-8-1, MEGURO-KU
TOKYO, 153, JAPAN

MR. K. MATSUSHIMA
MATSUSHITA COMMUNICATIONS INDUSTRIAL CO., LTD.
TOKYO, JAPAN

MR. H. MATSUTSUMOTO
KOBE UNIVERSITY
KOBE, JAPAN

DR. T. MATSUZAWA
YOKOGAWA-HEWLETT-PACKARD, LTD.
HACHIOJI
TOKYO, JAPAN

DR. DAVID L. MATTHEWS
INSTITUTE FOR FLUID DYNAMICS
UNIVERSITY OF MARYLAND
COLLEGE PARK, MARYLAND 20742
UNITED STATES

MR. K. MAUERSBERGER
ADDRESS UNKNOWN

MR. J. C. MAURER
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

DR. N. C. MAYNARD
CODE 612
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. HOWARD MCALLISTER
DEPARTMENT OF PHYSICS AND ASTRONOMY
2565 THE MALL
UNIVERSITY OF HAWAII
HONOLULU, HAWAII 96822
UNITED STATES

MR. J. F. MCCLAY
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. JAMES E. MCCOY
CODE TN2
NASA MANNED SPACECRAFT CENTER
HOUSTON, TEXAS 77058
UNITED STATES

DR. KENNETH G. MCCRACKEN
ADELAIDE UNIVERSITY
ADELAIDE 5001, AUSTRALIA

DR. IAN B. MCDIARMID
DIVISION OF PHYSICS
NATIONAL RESEARCH COUNCIL
OTTAWA K1A 0R6, ONTARIO, CANADA

DR. TONI MCDONNELL
ADDRESS UNKNOWN

DR. D. J. MCEWEN
INSTITUTE OF SPACE AND ATMOSPHERIC STUDIES
UNIVERSITY OF SASKATCHEWAN
SASKATOON, SASKATCHEWAN, CANADA

DR. R. L. MCGILL
UNKNOWN

PROF. CARL E. MCILWAIN
DEPARTMENT OF PHYSICS
UNIVERSITY OF CALIFORNIA, SAN DIEGO
LA JOLLA, CALIFORNIA 92037
UNITED STATES

MR. N. MCILWATH
ADDRESS UNKNOWN

MR. N. MCILWRAITH
ADDRESS UNKNOWN

MR. JOSEPH P. MCISAAC
AERONOMY LABORATORY, CODE CRL/LKB
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. I. MCKINLEY
QUEEN'S UNIVERSITY OF BELFAST
BELFAST, NORTHERN IRELAND

DR. ALLEN G. MCNAMARA
ASTROPHYSICS BRANCH
NATIONAL RESEARCH COUNCIL
OTTAWA, ONTARIO K1A 0R8, CANADA

DR. DOUGLAS P. MCNUTT
CODE 7126.2
US NAVAL RESEARCH LABORATORY
WASHINGTON, D.C. 20390
UNITED STATES

MR. E. B. MEADOWS
ADDRESS UNKNOWN

DR. E. A. MECHTLY
UNIVERSITY OF ILLINOIS
URBANA, ILLINOIS 61801
UNITED STATES

MR. KARL R. MEDROW
CODE 740
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. J. F. MEEKINS
CODE 7125.1
US NAVAL RESEARCH LABORATORY
WASHINGTON, D.C. 20390
UNITED STATES

MR. L. R. MEGILL
SPACE DISTURBANCE LABORATORY
NOAA RESEARCH LABORATORIES
BOULDER, COLORADO 80302
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. R. L. MEGILL
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
BOULDER, COLORADO 80302
UNITED STATES

MR. SOLIM MEHMUD
SENIOR SCIENTIFIC OFFICER
PAKISTAN SPACE + UPPER ATMOSPHERE - RESEARCH COMMITTEE
SONMIANI, PAKISTAN

MR. L. G. MEIRA
ATMOSPHERIC + SPACE PHYSICS LABORATORY
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

DR. F. MELZNER
MAX-PLANCK-INSTITUTE FOR PHYSICS AND ASTROPHYSICS
8046 GARCHING B.
MUNICH, FED. REP. OF GERMANY

DR. FERNANDO DE MENDONCA
LIBRARY
INSTITUTE OF SPACE RESEARCH
12200 SAO JOSE DOSCAMPOS
SAO PAULO, BRAZIL

DR. L. H. MEREDITH
CODE 600
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. R. F. MEYER
DIVISION OF PURE PHYSICS
NATIONAL RESEARCH COUNCIL
100 SUSSEX DRIVE
OTTAWA 1, ONTARIO, CANADA

MR. DEREK E. MILLER
HIGH ALTITUDE RESEARCH BRANCH
METEOROLOGICAL OFFICE, MET. C.19
LONDON ROAD
BRACKNELL RG12 2SZ, BERKS, ENGLAND

MR. J. E. MILLIGAN
ADDRESS UNKNOWN

MR. M. E. MILLS
STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA 94025
UNITED STATES

MR. H. MIMURA
YOKOGAWA-HEWLETT-PACKARD, LTD.
HACHIOJI
TOKYO, JAPAN

MR. M. MIMURA
ADDRESS UNKNOWN

MR. SHIGEYUKI MINAMI
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. M. MISAKI
UPPER ATMOSPHERIC PHYSICS LABORATORY
METEOROLOGICAL RESEARCH INSTITUTE
TOKYO, JAPAN

DR. S. MIYAMOTO
INST OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
MEGURO-KU
TOKYO, JAPAN

MR. S. MIYATAKE
DEPARTMENT OF ELECTRONICS
KYOTO UNIVERSITY
KYOTO, JAPAN

MR. S. MIYAZAKI
RADIO RESEARCH LABORATORIES
2-1, NUKUI-KITAMACHI 4-CHOME
KOGANEI-SHI, TOKYO, 184, JAPAN

MR. Y. MIYAZAKI
ADDRESS UNKNOWN

DR. A. R. MOLOZZI
COMMUNICATIONS RESEARCH CENTER
DEPARTMENT OF COMMUNICATIONS
SHIRLEY BAY, PO BOX 490, STATION 'A'
OTTAWA, ONTARIO K1N 8T5, CANADA

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

PROF. ANDRE G. V. MONFILS
INSTITUTE FOR ASTROPHYSICS
UNIVERSITY OF LIEGE
5, AVENUE DE COINTE
B-4200 COINTE, BELGIUM

DR. H. W. MOOS
JOHNS HOPKINS UNIVERSITY
BALTIMORE, MARYLAND 21218
UNITED STATES

MR. H. MORI
RADIO RESEARCH LABORATORIES
2-1, NUKUI-KITAMACHI 4-CHOME
KOGANEI-SHI, TOKYO, 184, JAPAN

MR. Y. MORI
GEOPHYSICAL INSTITUTE
TOHOKU UNIVERSITY
KATAHIRA-CHO
SENDAI JAPAN

DR. E. MORTELLI
UNIVERSITY OF SUSSEX
BRIGHTON, ENGLAND

DR. DONALD C. MORTON
DEPARTMENT OF ASTROPHYSICAL SCIENCE
PEYTON HALL
PRINCETON UNIVERSITY
PRINCETON, NEW JERSEY 08540
UNITED STATES

MR. R. MOTALBETTI
UNIVERSITY OF SASKATCHEWAN
SASKATOON
SASKATCHEWAN, CANDA

PROF. FORREST S. MOZER
PHYSICS DEPARTMENT
UNIVERSITY OF CALIFORNIA, BERKELEY
BERKELEY, CALIFORNIA 94720
UNITED STATES

MR. CARL E. GUSTAFSON
CODE 512
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. JOHN P. MULLEN
RADIO ASTRONOMY BRANCH, CODE LIR
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. D. MULLER
ADDRESS UNKNOWN

MR. WILLIAM S. MUNEY
CODE 683
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. H. MURAKAMI
PHYSICS DEPARTMENT
RIKKYO UNIVERSITY
TOSHIMAKU, TOKYO, JAPAN

MR. T. MURAOKA
ADDRESS UNKNOWN

DR. W. B. MURCRAY
UNIVERSITY OF ALASKA
COLLEGE, ALASKA 99701
UNITED STATES

DR. GUENTER MUSMANN
SPACE RESEARCH BRANCH
INSTITUTE FOR GEOPHYSICS
MENDELSSOHNSTRASSE 1
BRAUNSCHWEIG, FED. REP. OF GERMANY

MR. T. MUSTAFA
SUPARCO
KARACHI, PAKISTAN

MR. K. NAGANE
TOKYO ASTRONAUTICAL OBSERVATORY
TOKYO, JAPAN

MR. S. NAGAO
ADDRESS UNKNOWN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. F. NAGASE
DEPARTMENT OF PHYSICS
NAGOYA UNIVERSITY
FURO-CHO, CHIKUSA-KU
NAGOYA, JAPAN

PROF. TAKESI NAGATA
GEOPHYSICAL INSTITUTE
UNIVERSITY OF TOKYO
BUNKYO-KU
TOKYO, JAPAN

MR. M. NAGAYAMA
ADDRESS UNKNOWN

DR. A. F. NAGY
SPACE PHYSICS RESEARCH LABORATORY
UNIVERSITY OF MICHIGAN
PO BOX 618
ANN ARBOR, MICHIGAN 48107
UNITED STATES

MR. K. NAKADAN
DOSHISA UNIVERSITY
KYOTO, JAPAN

MR. M. NAKAGWA
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. K. NAKAI
INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH
UNIVERSITY OF TOKYO
SAITAMA PREFECTURE, JAPAN

MR. S. NAKAI
FACULTY OF ENGINEERING
OSAKA UNIVERSITY
YAMADA-UE, SUITA
OSAKA, JAPAN

MR. A. NAKAMOTO
PHYSICS DEPARTMENT
RIKKYO UNIVERSITY
TOSHIMAKU, TOKYO, JAPAN

MR. J. NAKAMOTO
INSTITUTE OF ATOMIC ENERGY
UNIVERSITY OF TOKYO
YOKOSUKA, JAPAN

MR. H. NAKAMURA
ADDRESS UNKNOWN

MR. J. NAKAMURA
COLLEGE OF GENERAL EDUCATION
UNIVERSITY OF TOKYO
KOMABA, 3-8-1, MEGURO-KU
TOKYO, 153, JAPAN

MR. M. NAKAMURA
KUBOTA METEOROLOGICAL EQUIPMENT COMPANY
KOGA, JAPAN

MR. M. NAKAMURA
INSTITUTE OF OPTICAL RESEARCH
TOKYO KYOIKU UNIVERSITY
OOTSUKA-3, BUNKYO-KU
TOKYO, JAPAN

MR. T. NAKAMURA
MEISEI ELECTRICAL COMPANY
KAMAKURA, JAPAN

MR. T. NAKAMURA
TOKYO ASTRONAUTICAL OBSERVATORY
UNIVERSITY OF TOKYO
OSAWA, MITAKA
TOKYO 181, JAPAN

MR. V. NARAYANAN
THUMBA EQUATORIAL ROCKET LAUNCHING STATION (TERLS)
THUMBA (TRIVANDRUM), INDIA

DR. R. S. NARCISI
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. S. NARITA
ADDRESS UNKNOWN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

NATIONAL CENTER FOR SCIENTIFIC RESEARCH (CNRS)
ADDRESS NOT PROVIDED, U.S.S.R.

DR. JOHN E. NAUGLE
DEPUTY ASSOCIATE ADMINISTRATOR
NASA HEADQUARTERS
CODE SS
WASHINGTON, D.C. 20546
UNITED STATES

MR. K. A. NEELAKANTAN
ADDRESS UNKNOWN

MR. A. D. C. NEIP
ADDRESS UNKNOWN

MR. S. NELSON
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

DR. N. W. NERURKAR
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

DR. WERNER M. NEUPERT
CODE 682
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. HANS NEUSS
MAX-PLANCK-INSTITUTE FOR PHYSICS AND ASTROPHYSICS
GUANABARA,
8 MUNICH, FED. REP. OF GERMANY

DR. RONALD G. NEWBURGH
USAF CAMBRIDGE RESEARCH LABORATORIES
L.G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. P. NEWMAN
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. W. M. NEWPERT
ADDRESS UNKNOWN

MR. A. C. NEWTON
MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

DR. R. W. NICHOLLS
DEPARTMENT OF PHYSICS
YORK UNIVERSITY
TORONTO, ONTARIO, CANADA

MR. R. NIDEY
ADDRESS UNKNOWN

DR. ALFRED O. C. NIER
SCHOOL OF PHYSICS AND ASTRONOMY
INSTITUTE OF TECHNOLOGY
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

PROF. J. S. NISBET
PENNSYLVANIA STATE UNIVERSITY
UNIVERSITY PARK, PENNSYLVANIA 16802
UNITED STATES

MR. K. NISHI
TOKYO ASTRONOMICAL OBSERVATORY
MITAKA
TOKYO, JAPAN

MR. T. NISHIMURA
DEPARTMENT OF PHYSICS
NAGOYA UNIVERSITY
NAGOYA, JAPAN

MR. M. NISHINO
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. MARK B. NOLAN
CODE 742.2
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. WILLIAM P. NORDBERG
CODE 650
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. KEITH NORMAN
MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

PROF. ROBERT NOVICK
DEPARTMENT OF PHYSICS
COLUMBIA UNIVERSITY
538 WEST 120TH STREET
NEW YORK, NEW YORK 10027
UNITED STATES

MR. K. A. NULAKANTAN
ADDRESS UNKNOWN

MR. BRIAN J. O'BRIAN
UNIVERSITY OF SYDNEY
SYDNEY, AUSTRALIA

MR. R. R. O'NEIL
OPTICAL PHYSICS LAB, CODE OPR
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

PROF. TATSUZO OBAYASHI
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
KOMABA, MEGURO-KU, TOKYO 153, JAPAN

MR. M. ODA
INST OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
MEGURO-KU
TOKYO, JAPAN

MR. OERTEL
ADDRESS UNKNOWN

MR. D. OFFERMANN
ADDRESS UNKNOWN

MR. T. OGATA
ADDRESS UNKNOWN

DR. T. OGAWA
GEOPHYSICAL RESEARCH LABORATORY
FACULTY OF SCIENCE
UNIVERSITY OF TOKYO
YAYOI, BUNKYO-KU, TOKYO, JAPAN

MR. H. OGAWA
NAGOYA UNIVERSITY
NAGOYA, JAPAN

MR. T. OGAWA
OCHANOMIZU UNIVERSITY
TOKYO, JAPAN

MR. T. OGAWA
IONOSPHERE RESEARCH LABORATORY
KYOTO UNIVERSITY
KYOTO, JAPAN

MR. T. OGAWARA
ADDRESS UNKNOWN

MR. Y. OGAWARA
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
KOMABA, MEGURO-KU, TOKYO, JAPAN

DR. KEITH OGILVIE
CODE 690
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. N. OHCHI
COLLEGE OF GENERAL EDUCATION
UNIVERSITY OF GIFU
GIFU, JAPAN

MR. M. OHSE
ADDRESS UNKNOWN

MR. M. OHSHIO
ADDRESS UNKNOWN
2-1, NUKUI-KITAMACHI 4-CHOME
KOGANEI-SHI, TOKYO 184, JAPAN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC
EXPERIMENTS USING SOUNDING ROCKETS

MR. K. OHTSUKA
ADDRESS UNKNOWN

MR. T. OKADA
ADDRESS UNKNOWN

MR. K. OKAWA
MITSUBISHI ELECTRIC COMPANY, LIMITED
KAMAKURA, JAPAN

MR. A. OKAZAKI
HITACHI COMPANY, LTD.
TOTSUKA, YOKOHAMA, JAPAN

MR. T. OKUMOTO
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. O. H. OLESEN
ADDRESS UNKNOWN

MR. M. W. OLESON
CODE 8441
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. ROBERT OLSON
WHITE SANDS MISSILE RANGE
WHITE SANDS, NEW MEXICO 88002
UNITED STATES

DR. ALBERT G. OPP
NASA HEADQUARTERS
CODE SG
WASHINGTON, D.C. 20546
UNITED STATES

MR. L. E. ORSAK
STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA 94025
UNITED STATES

DR. JOHANNES ORTNER
SPACE MISSIONS DIVISION
EUROPEAN SPACE RESEARCH ORGANIZATION
114 CHARLES DE GAULLE AVENUE
NEUILLY-SUR-SEINE 92, FRANCE

MR. M. OSE
ADDRESS UNKNOWN

MR. M. OSHIO
RADIO RESEARCH LABORATORY
KOKUBUNJI
TOKYO, JAPAN

MR. M. OSHIO
RADIO RESEARCH LABORATORY
KOKUBUNJI
TOKYO, JAPAN

MR. M. OSHIO
RADIO RESEARCH LABORATORY
KOKUBUNJI
TOKYO, JAPAN

MR. T. OSHIO
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. A. OSTER
MAX-PLANCK-INSTITUTE FOR NUCLEAR
PHYSICS
SAUPFERCHECKWEG, HEIDELBERG 1,
FED. REP. OF GERMANY

MR. T. OTA
ADDRESS UNKNOWN

MR. J. OTSU
RESEARCH INSTITUTE OF ATMOSPHERICS
NAGOYA UNIVERSITY
NAGOYA, JAPAN

MR. K. OTSUKA
KUBOTA METEOROLOGICAL EQUIPMENT CO.
KOGA, JAPAN

MR. Y. OTSUKA
ADDRESS UNKNOWN

MR. RICHARD H. OTT, JR.
CODE 742.1
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. M. OUYAMA
MEISEI DENKI COMPANY, LTD.
NO 3-8-3 KAMIOSAKI SHINAGANAKU
TOKYO, JAPAN

MR. H. OYA
IONOSPHERE OBSERVATION LABORATORY
KYOTO UNIVERSITY
UJI, KYOTO, JAPAN

MR. K. OYA
ADDRESS UNKNOWN

DR. K. OYAMA
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
KOMABA, MEGURO-KU, TOKYO, JAPAN

MR. M. OYAMA
MEISEI ELECTRIC COMPANY
TOKYO, JAPAN

DR. D. M. PACKER
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. D. EDGAR PAGE
COSMIC RAY DIVISION
SPACE SCIENCE DEPARTMENT
EUROPEAN SPACE RESEARCH AND TECH CNTR
DOMEINWEG, NOORDWIJK, NETHERLANDS

MR. ROBERT PARKER
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

DR. JOHN H. PARKINSON
DEPARTMENT OF PHYSICS
LEICESTER UNIVERSITY
LEICESTER LE1 7RH, ENGLAND

MR. W. H. PARKINSON
HARVARD COLLEGE OBSERVATORY
CAMBRIDGE, MASSACHUSETTS 02138
UNITED STATES

MR. N. P. PATTERSON
US NAVAL RESEARCH LABORATORY
4555 OVERLOCK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. J. B. PEARCE
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

DR. A. PEDERSEN
HEAD, IONOSPHERIC PHYSICS DIVISION
SPACE SCIENCE DEPARTMENT
EUROPEAN SPACE RESEARCH AND TECH CNTR
DOMEINWEG, NOORDWIJK, NETHERLANDS

MR. A. PEDERSEN
ADDRESS UNKNOWN

MR. HOWARD R. PEDOLSKY
CODE 721
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. DAVID T. PELZ
CODE 621
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

PROF. BERNARD PETERS
DANISH SPACE RESEARCH INSTITUTE
LUNDTOFTEVEJ 7
2800 LYNGBY, DENMARK

DR. O. E. PETERSEN
TECHNICAL UNIVERSITY OF DENMARK
2800 LYNGBY, DENMARK

MR. J. W. PETERSON
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

MR. JOHN W. PETERSON
838 GALSWORTHY AVENUE
ORLANDO, FLORIDA 32809
UNITED STATES

MR. D. PETWILER
ADDRESS UNKNOWN

DR. KARL A. PFITZER
CODE A3-833, BBKO, MS 20
MCDONNELL-DOUGLAS ASTRONAUTICS COMPANY
5301 BOLSA AVENUE
HUNTINGTON BEACH, CALIFORNIA 92647
UNITED STATES

DR. C. R. PHILBRICK
COMPOSITION BRANCH, AERONOMY LAB
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. GRACE L. PICCIOLO
CODE 625
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. GEORGE F. PIEPER
CODE 600
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. J. L. PIPER
CORNELL UNIVERSITY
ITHACA, NEW YORK 14850
UNITED STATES

PROF. P. R. PISHAROTY
PHYSICAL RESEARCH LABORATORY
NAVRANGPURA
AHMEDABAD-9, INDIA

MR. HENRY W. PLOHR
NASA LEWIS RESEARCH CENTER
MS 23-1
CLEVELAND, OHIO 44135
UNITED STATES

MR. THOMAS R. POCHARI
NASA AMES RESEARCH CENTER
MS 237-6
MOFFETT FIELD, CALIFORNIA 94035
UNITED STATES

MR. A. A. POKHUNKOV
ADDRESS UNKNOWN

DR. A. E. POTTER
NASA MANNED SPACECRAFT CENTER
HOUSTON, TEXAS 77058
UNITED STATES

DR. WENTWORTH E. POTTER
PHYSICS DEPARTMENT
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

DR. KENNETH A. POUNDS
X-RAY ASTRONOMY GROUP
DEPARTMENT OF PHYSICS
LEICESTER UNIVERSITY
LEICESTER LE1 7RH, ENGLAND

DR. SATYA PRAKASH
PHYSICAL RESEARCH LABORATORY
NAVRANGPURA
AHMEDABAD-9, INDIA

MISS ELEANOR C. PRESSLY
CODE 744
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. J. PRESSMAN
GEOPHYSICS CORP. OF AMERICA
BURLINGTON ROAD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. N. PRINGGOADISURJO
LAPAN SPACE CENTER
TJILILITAN INDONESIA

MR. D. K. PRINZ
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. G. PROCA
EUROPEAN SPACE RESEARCH INSTITUTE
ROME, ITALY

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. A. R. PUJO
EBRO OBSERVATORY
TORTOSA (TARRAGONA), SPAIN

MR. J. D. PURCELL
CODE 7142
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. T. QUINN
PENNSYLVANIA STATE UNIVERSITY
UNIVERSITY PARK, PENNSYLVANIA 16802
UNITED STATES

MR. S. RACICELLA
TUCUMAN NATIONAL UNIVERSITY
AYACUCHO 482
SAN MIGUEL DE TUCUMAN, ARGENTINA

MR. RAETHJEN
ADDRESS UNKNOWN

DR. MOHAMMED RAHMATULLAH
PAKISTAN SPACE AND UPPER ATMOSPHERE RESEARCH COMMITTEE
PO BOX 3125
KARACHI 29, PAKISTAN

DR. R. RAGHAVA RAO
PHYSICAL RESEARCH LABORATORY
NAVRANGPURA
AHMEDABAD-9, INDIA

MR. M. S. V. RAO
INDIA METEOROLOGICAL DEPARTMENT
POONA-5, INDIA

DR. RAMACHANDRA UDIPI RAO
X-RAY ASTRONOMY DEPARTMENT
PHYSICAL RESEARCH LABORATORY
AHMEDABAD 9, GUJARAT, INDIA

MR. JAMES J. RAST
CODE 721
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. J. A. RATCLIFFE
ADDRESS UNKNOWN

DR. P. RAUSER
MAX-PLANCK-INSTITUTE FOR NUCLEAR PHYSICS
SAUPFERCHECKWEG, HEIDELBERG 1,
FED. REP. OF GERMANY

PROF. K. RAWER
SPACE RESEARCH INSTITUTE
KRONENSTR. 13
D 78 FREIBURG IM BREISGAU
FED. REP. OF GERMANY

DR. DONALD V. REAMES
CODE 662
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. STEPHEN REARWIN
DEPARTMENT OF PHYSICS
UNIVERSITY OF CALIFORNIA, SAN DIEGO
LA JOLLA, CALIFORNIA 92037
UNITED STATES

DR. DAVID L. REASONER
DEPARTMENT OF SPACE SCIENCE
RICE UNIVERSITY
PO BOX 1892
HOUSTON, TEXAS 77001
UNITED STATES

MR CARL A. REBER
CODE 621
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. DAVID REES
PHYSICS DEPARTMENT
UNIVERSITY COLLEGE LONDON
GOWER STREET
LONDON WC1E 6BT, ENGLAND

MR. REEVES
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. EDMOND R. REEVES
HARVARD COLLEGE OBSERVATORY
60 GARDEN STREET
CAMBRIDGE, MASSACHUSETTS 02138
UNITED STATES

MR. JOHN D. REGETZ, JR.
NASA LEWIS RESEARCH CENTER
MS 7-1
CLEVELAND, OHIO 44135
UNITED STATES

DR. WILLIAM P. REIDY
VISIDYNE, INCORPORATED
169 MERRIMAC STREET
WOBURN, MASSACHUSETTS 01801
UNITED STATES

MR. REIMER
ADDRESS UNKNOWN

MR. H. REME
CENTER FOR SPACE RADIATION STUDIES
TOULOUSE UNIVERSITY
11, AVE. DU COL. ROCHE, B.P. 4057
31 TOULOUSE 04, FRANCE

DR. WILLIAM A. RENSE
LABORATORY FOR ATMOSPHERIC AND SPACE PHYSICS
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

MR. L. REY
UNIVERSITY OF STOCKHOLM
TULEGATAN 41
S-1043 STOCKHOLM, SWEDEN

MR. H. J. RICCIARDI
ADDRESS UNKNOWN

PROF. WILLI W. RIEDLER
COMMUNICATIONS AND WAVE PROPAGATION
GRAZ TECHNICAL UNIVERSITY
KRENNGASSE 37/II
A8010 GRAZ, AUSTRIA

DR. E. RIEGER
MAX-PLANCK-INSTITUTE FOR PHYSICS AND ASTROPHYSICS
8046 GARCHING B.
MUNICH, FED. REP. OF GERMANY

MR. W. ROLFE
COMMUNICATIONS RESEARCH CENTER
DEPARTMENT OF COMMUNICATIONS
SHIRLEY BAY, PO BOX 490, STATION 'A'
OTTAWA, ONTARIO K1N 8T5, CANADA

MR. ROMAN
ADDRESS NOT PROVIDED

MR. J. B. ROMANS
AMERICAN SCIENCE AND ENGINEERING, INC.
11 CARLETON STREET
CAMBRIDGE, MASSACHUSETTS 02142
UNITED STATES

MR. L. H. RORDEN
STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA 94025
UNITED STATES

DR. ROSBACH
ADDRESS UNKNOWN

MR. G. ROSE
ADDRESS UNKNOWN

DR. NORMAN W. ROSENBERG
AERONOMY LABORATORY, CODE CRL/LKC
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. A. ROSSBACH
INSTITUTE FOR ASTROPHYSICS
DFVLR
OBERPFAFFENHOFEN, FED. REP. OF GERMANY

DR. LOTHAR ROSSBERG
MAX PLANCK INSTITUTE FOR AERONOMY
STRATOSPHERIC-PHYSICS INSTITUTE
3411 LINDAU/HARZ, FED. REP. OF GERMANY

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. F. ROSSLER
FRANCO-ALLEMAND RESEARCH INSTITUTE
12, RUE DE L'INDUSTRIE
68 SAINT LOUIS, (HAUT-RHIN)
ALSACE, FRANCE

DR. GORDON ROSTOKER
DEPARTMENT OF PHYSICS
UNIVERSITY OF ALBERTA
EDMONTON, ALBERTA, CANADA

DR. PAMELA F. ROTHWELL
DEPARTMENT OF PHYSICS
UNIVERSITY OF SOUTHAMPTON
SOUTHAMPTON SO9 5NH, ENGLAND

MR. W. ROTMAN
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. A. A. RUDMANN
CODE 722.3
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. A. J. RUEGER
ADDRESS UNKNOWN

MR. SAM RUSSELL
AIRBORNE INSTRUMENTS LABORATORY
MELVILLE, LONG ISLAND,
NEW YORK 1174
UNITED STATES

MR. WILLIAM A. RUSSELL, JR.
CODE 721
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. T. RYAN
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. MICHAEL J. RYCROFT
DEPARTMENT OF PHYSICS
UNIVERSITY OF SOUTHAMPTON
SOUTHAMPTON SO9 5NH, ENGLAND

DR. P. RYDER
METEOROLOGICAL OFFICE
LONDON ROAD
BRACKNELL RG12 2SZ, BERKS, ENGLAND

DR. A. SABURI
NIPPON ELECTRIC CO.
SIMONUMABE, KAWASAKI
KANAGAWA, JAPAN

MR. P. A. SACHER
ADDRESS UNKNOWN

MRS. RITA C. SAGALYN
CODE LIF, STOP 30
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

K. SAITO
TOKYO ASTROPHYSICAL OBSERVATORY
MITAKA
TOKYO, JAPAN

MR. H. SAITO
ADDRESS UNKNOWN

MR. K. SAITO
LEICESTER UNIVERSITY
LEICESTER, ENGLAND

MR. I. SAKAI
JAPAN METEOROLOGICAL AGENCY
OTE-MACHI
CHIYODA-KU
TOKYO 100, JAPAN

MR. I. SAKAI
METEOROLOGICAL ROCKET STATION
1-29, TAHAMASHITA, RYORI
SANRIKU MACHI, KESEN-GUN
IWATE-KEN, 022-02, JAPAN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. H. SAKURAI
IONOSPHERE RESEARCH LABORATORY
KYOTO UNIVERSITY
KYOTO, JAPAN

MR. T. SAKURAI
DOSHISHA UNIVERSITY
ADDRESS UNKNOWN, JAPAN

DR. JOHN W. SALISBURY
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. JOHN A. SANDOCK
(CRPJ)
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. P. W. SANFORD
DEPARTMENT OF PHYSICS
MULLARD SPACE SCIENCE LABORATORY
HOLMBURY, ST. MARY
DORKING, SURREY, ENGLAND

MR. O. SANTIOCHI
LABORATORY OF COSMIC RADIATION
NATIONAL UNIVERSITY OF TUCUMAN
AYACUCHO 482
SAN MIGUEL DE TUCUMAN, ARGENTINA

PROF. V. A. SARABHAI
CHAIRMAN, ATOMIC ENERGY COMMISSION
APOLLO PIER ROAD
BOMBAY 1, INDIA

MR. A. SASAKI
ADDRESS UNKNOWN

MR. H. SASAKI
ADDRESS UNKNOWN

MR. M. SASANUMA
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

DR. T. S. G. SASTRY
AERONOMY DEPARTMENT
PHYSICAL RESEARCH LABORATORY
AHMEDABAD-9, GUJARAT, INDIA

MR. O. SATO
YOKOGAWA-HEWLETT-PACKARD LIMITED
HACHIOJI
TOKYO, JAPAN

PROF. J. SAYERS
ELECTRON PHYSICS AND SPACE RES DEPT
UNIVERSITY OF BIRMINGHAM
PO BOX 363
BIRMINGHAM B15 2TT, ENGLAND

MR. E. J. SCHAFFER
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

PROF. HAROLD I. SCHIFF
FACULTY OF SCIENCE
YORK UNIVERSITY
4700 KEELE STREET
DOWNSVIEW, ONTARIO 463, CANADA

DR. ERWIN R. SCHMERLING
CODE SG
NASA HEADQUARTERS
WASHINGTON, D.C. 20546
UNITED STATES

MR. H. J. SCHULTE
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48104
UNITED STATES

PROF. G. SCHUMANN
PHYSICAL INSTITUTE
UNIVERSITY OF HEIDELBERG
PHILOSOPHENWEG 12, 69 HEIDELBERG 1,
FED. REP. OF GERMANY

MR. REUBEN SCOLNIK
CODE 672.1
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. A. F. D. SCOTT
PHYSICS DEPARTMENT
UNIVERSITY COLLEGE LONDON
GOWER STREET
LONDON WC1, ENGLAND

MR. STANLEY C. SCOTT
MS 237-6
NASA AMES RESEARCH CENTER
MOFFETT FIELD, CALIFORNIA 94035
UNITED STATES

MR. R. T. SEAL, JR.
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. C. F. SECHRIST
UNIVERSITY OF ILLINOIS
URBANA, ILLINOIS 61801
UNITED STATES

MR. J. CARL SEDDON
CODE 730
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. K. SEINO
ADDRESS UNKNOWN

MR. H. SEKIGUCHI
DEPARTMENT OF PHYSICS
RIKKYO UNIVERSITY
TOSHIMAKU, TOKYO, JAPAN

MR. K. SEKIGUCHI
ADDRESS UNKNOWN

MR. GIDEON P. SERBU
CODE 623
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. PETER J. SERLEMITSOS
CODE 661
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

SERVICE D'AERONOMIE
NATIONAL SCIENTIFIC RESEARCH CENTER
VERRIERES-LE-BUISSON, FRANCE

DR. GERALD W. SHARP
LOCKHEED MISSILE AND SPACE COMPANY
LOCKHEED PALO ALTO RESEARCH LABORATORY
3251 HANOVER STREET
PALO ALTO, CALIFORNIA 94304
UNITED STATES

MR. W. SHARP
ATMOSPHERIC AND SPACE PHYSICS LABORATORY
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

MR. C. E. SHELDON
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

MR. D. B. SHENTON
ASTROPHYSICS RESEARCH UNIT
CULHAM LABORATORY
ABINGDON, BERKS, ENGLAND

MR. G. G. SHEPARD
UNIVERSITY OF SASKATCHEWEN
SASKATOON,
SASKATCHEWAN, CANADA, CANADA

DR. GORDON G. SHEPHERD
CENTRE FOR RESEARCH IN SPACE SCIENCE
YORK UNIVERSITY
4700 KEELE STREET
DOWNSVIEW, ONTARIO 463, CANADA

MR. L. M. SHEPPARD
WEAPONS RESEARCH ESTABLISHMENT
GPO BOX 1424H
ADELAIDE 5001, AUSTRALIA

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. C. SHERMAN
GEOPHYSICS CORPORATION OF AMERICA
BURLINGTON ROAD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. I. SHIMIZU
JAPAN METEOROLOGICAL AGENCY
OBSERVATION DIVISION
OTE-MACHI, CHIYODA-KU
TOKYO, JAPAN

MR. M. SHIMIZU
ADDRESS UNKNOWN

MR. Y. SHIMIZU
SOKKISHA COMPANY
TOKYO, JAPAN

DR. J. S. SHIRKE
PHYSICAL RESEARCH LABORATORY
NAVRANGPURA
AHMEDABAD-9, INDIA

MR. I. SHIRO
RADIO RESEARCH LABORATORY
2-1, NUKUI-KITAMACHI 4-CHOME
KOGANEI-SHI, TOKYO 184, JAPAN

DR. KANDIAH SHIVANANDAN
CODE 7126.3
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, S.W.
WASHINGTON, D.C. 20390
UNITED STATES

MR. R. W. SHOOK
BALL BROTHERS RESEARCH CORPORATION
PO BOX 1062
BOULDER, COLORADO 80302
UNITED STATES

MR. P. G. SHUKLA
UNIVERSITY OF CALGARY
CALGARY, ALBERTA, CANADA

MR. H. F. SHULTE
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48105
UNITED STATES

MR. BERTRAM M. SHUMAN
SPACE PHYSICS LABORATORY, CODE PHG
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. D. N. SIKDAR
INDIA METEOROLOGICAL DEPARTMENT
POONA-5, INDIA

DR. SAM SILVERMAN
AERONOMY LABORATORY, CODE LKA
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. M. SIMEK
CZECHOSLOVAKIA ACADEMY OF SCIENCES
CNDREJOV OBSERVATORY
CNDREJOV, CZECHOSLOVAKIA

MR. M. SIMERMAN
LABORATORY OF COSMIC RADIATION
NATIONAL UNIVERSITY OF TUCUMAN
AYACUCHO 482
SAN MIGUEL DE TUCUMAN, ARGENTINA

MR. N. SISSENWINE
AERONOMY LABORATORY, CODE LKI
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. K. SITTE
MAX-PLANCK-INSTITUTE FOR NUCLEAR PHYSICS
SAUPHERCHECKWEG, HEIDELBERG 1,
FED. REP. OF GERMANY

MR. GUNNAR SKOVLI
NORWEGIAN DEFENCE RESEARCH ESTABLISHMENT
PO BOX 25
N-2007 KJELLER, NORWAY

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. R. SKRIVANEK
SPACE PHYSICS LABORATORY, CODE PHD
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. W. A. SLOAN
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. DON F. SMART
SPACE PHYSICS LABORATORY, CODE CRL/PHE
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. MICHAEL SMIDDY
(CRUB)
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. ANDREW M. SMITH
CODE 672
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. L. G. SMITH
AERONAUTICS AND ASTRONAUTICS
DEPARTMENT
STANFORD UNIVERSITY
STANFORD, CALIFORNIA 94305
UNITED STATES

DR. LESLIE G. SMITH
GEOPHYSICS CORPORATION OF AMERICA
BURLINGTON ROAD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. L. B. SMITH
SANDIA LABORATORIES
ALBUQUERQUE, NM

MR. W. SMITH
GEOPHYSICS CORPORATION OF AMERICA
BURLINGTON ROAD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. WENDELL S. SMITH
CODE 650
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. C. P. SMITH, JR.
CODE 730
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. C. B. SNIDER
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. ROBERT K. SOBERMAN
SPACE SCIENCES LABORATORY
GENERAL ELECTRIC COMPANY
PO BOX 8555
PHILADELPHIA, PENNSYLVANIA 19101
UNITED STATES

MR. R. SOBERMAN
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. Y. V. SOMAYAJULU
NATIONAL PHYSICAL LABORATORY
HILLSIDE ROAD
NEW DELHI 12, INDIA

MR. FINN SORAAS
DEPARTMENT OF PHYSICS, DIVISION B
UNIVERSITY OF BERGEN
ALLEGATEN 53-55
5000 BERGEN, NORWAY

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. ERNEST F. SORGNIT
CODE 721
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. GILES F. SPAID
CODE 625
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. SPEER
ADDRESS UNKNOWN

MR. NELSON W. SPENCER
CODE 620
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. K. SPENNER
WORKING GROUP FOR SPACE PHYSICS RESEARCH
FREIBURG, FED. REP. OF GERMANY

DR. A. T. STAIR
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. A. STANIFORTH
ADDRESS UNKNOWN

MR. THEODORE P. STECHER
CODE 672
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. SAMUEL R. STEVENS
CODE 724.3
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. E. A. STEWARDSON
LEICESTER UNIVERSITY
LEICHESTER LE1 7RH, ENGLAND

DR. KENNETH H. STEWART
METEOROLOGICAL OFFICE
M.O. 19
LONDON ROAD
BRACKNELL, BERKS, ENGLAND

MR. M. STINE
AEROJET GENERAL CORPORATION
9200 EAST FLAIR DRIVE
EL MONTE, CALIFORNIA 91734
UNITED STATES

DR. WILLY STOFFREGEN
UPPSALA IONOSPHERIC OBSERVATORY
S-75590 UPPSALA 1, SWEDEN

MR. JOHN D. STOLARK
CODE 645
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. ROBERT G. STONE
CODE 693
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. V. E. STONE
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

DR. LLEWELYN R. O. STOREY
IONOSPHERIC RESEARCH GROUP
NATIONAL CENTER FOR SPACE RESEARCH
4 AVENUE DE NEPTUNE
94 SAINT-MAUR, FRANCE

MR. E. E. STUART
ADDRESS UNKNOWN

MR. H. SUGIUCHI
ADDRESS UNKNOWN

MR. T. SUGIYAMA
ADDRESS UNKNOWN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. T. SUITSU
RADIO RESEARCH LABORATORIES
MINISTRY OF POSTS AND TELECOMM.
2-1, NUKUI-KITAMACHI 4-CHOME
KOGANEI-SHI, TOKYO, 184, JAPAN

DR. R. SUTER
CODE 622
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. N. SUZUKI
OSAKA UNIVERSITY
YAMADA-UE, SUITA
OSAKA, JAPAN

MR. S. SUZUKI
JAPAN METEOROLOGICAL AGENCY
OTE-MACHI
CHIYODA-KU
TOKYO 100, JAPAN

MR. S. SUZUKI
MEISEI DENKI COMPANY, LTD.
NO 3-8-3 KAMIOSAKI SHINAGAWAKU
TOKYO, JAPAN

MR. Y. SUZUKI
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. P. SWENSON
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. T. M. TABANERA
ADDRESS UNKNOWN

MR. K. TAKAGISHI
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. T. TAKAKURA
TOKYO ASTRONAUTICAL OBSERVATORY
UNIVERSITY OF TOKYO
OSAWA, MITAKA
TOKYO 181, JAPAN

MR. K. TAKAYAMA
ADDRESS UNKNOWN

MR. A. TAKECHI
TOKYO ASTRONOMICAL OBSERVATORY
MITAKA
TOKYO, JAPAN

DR. S. TAKEMURA
DEPARTMENT OF INSTRUMENTATION
KOBE UNIVERSITY
KOBE, JAPAN

MR. H. TAKEUCHI
INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH
UNIVERSITY OF TOKYO
MEGURO-KU, TOKYO, JAPAN

MR. YOSHIO TAKEYA
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. S. TAKIGAWA
ADDRESS UNKNOWN

MR. S. TANABA
ADDRESS UNKNOWN

MR. H. TANABE
TOKYO ASTRONOMICAL OBSERVATORY
MITAKA
TOKYO, JAPAN

MR. S. TANABE
MEISEI ELECTRICAL COMPANY
KAMAKURA, JAPAN

DR. YASUO TANAKA
DEPARTMENT OF PHYSICS
NAGOYA UNIVERSITY
CHIKUSA-KU
NAGOYA, JAPAN

MR. T. TANAKA
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
KOMBA, MEGURO-KU, TOKYO, JAPAN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

PROF. HARUO TANAKA
RESEARCH INSTITUTE OF ATMOSPHERICS
NAGOYA UNIVERSITY
TOYOKAWA 442, JAPAN

MR. W. TATEBE
ADDRESS UNKNOWN

MR. HARRY A. TAYLOR, JR.
CODE 621
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. H. TEITELBAUM
ADDRESS UNKNOWN

DR. R. C. TENNYSON
INSTITUTE FOR AEROSPACE STUDIES
UNIVERSITY OF TORONTO
TORONTO 181, ONTARIO, CANADA

DR. MORRIS TEPPER
CODE SRD
NASA HEADQUARTERS
WASHINGTON, D.C. 20546
UNITED STATES

MR. JOHN S. THEON
CODE 651
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. R. J. THOMAS
UTAH STATE UNIVERSITY
SALT LAKE CITY, UTAH 84720
UNITED STATES

MR. JOSEPH C. THORNWALL
ADDRESS UNKNOWN

DR. E. THRANE
NORWEGIAN DEFENCE RESEARCH
ESTABLISHMENT
PO BOX 25
2007 KJELLER, LILLESTROM, NORWAY

MR. G. TIMOTHY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST., MARY DORKING
LONDON WC1, ENGLAND

PROF. T. TOHMATSU
GEOPHYSICAL RESEARCH LABORATORY
FACULTY OF SCIENCE
UNIVERSITY OF TOKYO
YAYOI, BUNKYO-KU, TOKYO, JAPAN

MR. A. TOI
ADDRESS UNKNOWN

MR. S. TOKUDA
RESEARCH INSTITUTE OF ATMOSPHERICS
NAGOYA UNIVERSITY
TOYOKAWA, AICHI, NAGOYA, JAPAN

MR. HAROLD B. TOLEFSON
NASA LANGLEY RESEARCH CENTER
MS 240
HAMPTON, VIRGINIA 23365
UNITED STATES

MR. R. B. TOOLIN
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. W. TOSER
DUDLEY OBSERVATORY
ALBANY, NEW YORK 12205
UNITED STATES

DR. RICHARD TOUSEY
SPACE SCIENCE DIVISION, CODE 7140
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. FUMIO TOYAMA
AERONAUTICS AND ASTRONAUTICS INSTITUTE
TOKAI UNIVERSITY
HIRATSUKA, JAPAN

MR. TRINKS
ADDRESS UNKNOWN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

DR. JAN TROIM
NORWEGIAN DEFENSE RESEARCH - ESTABLISHMENT
PO BOX 25
KJELLER, NORWAY

MR. A. TSUCHIYA
TOKYO ASTRONAUTICAL OBSERVATORY
TOKYO, JAPAN

MR. T. TSUCHIYA
NAGOYA UNIVERSITY
TOYOKAWA, AICHI, NAGOYA, JAPAN

MR. T. TSUJII
IONOSPHERE RESEARCH LABORATORY
KYOTO UNIVERSITY
UJI, KYOTO, JAPAN

MR. N. TSUKADA
IONOSPHERE RESEARCH LABORATORY
KYOTO UNIVERSITY
KYOTO, JAPAN

MR. N. TSUKADA
PHYSICS DEPARTMENT
RIKKYO UNIVERSITY
TOKYO, JAPAN

MR. M. TSUKUDA
PHYSICS DEPARTMENT
RIKKYO UNIVERSITY
NISHI-IKEBUKURO
TOSHIMAKU, TOKYO, JAPAN

MR. K. TSURUBAYASHI
ADDRESS UNKNOWN

MR. H. TSURUTA
GEOPHYSICAL INSTITUTE
TOHOKU UNIVERSITY
SENDAI, JAPAN

MR. M. TSUTSUE
IONOSPHERE RESEARCH LABORATORY
KYOTO UNIVERSITY
KYOTO, JAPAN

MR. M. TSUTSUMI
MATSUSHITA COMMUNICATIONS INDUSTRIAL COMPANY, LIMITED
TOKYO, JAPAN

MR. S. TSUTSUMI
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. J. P. TURTLE
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. I. UDIN
INSTITUTE OF METEOROLOGY
UNIVERSITY OF STOCKHOLM
STOCKHOLM 19, SWEDEN

MR. A. UEDA
ADDRESS UNKNOWN

MR. R. UEDA
INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH
UNIVERSITY OF TOKYO
TOKYO, JAPAN

MR. M. UENO
DEPARTMENT OF INSTRUMENTATION
KOBE UNIVERSITY
KOBE, JAPAN

MR. F. UKIGAYA
INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH
SAITAMA, JAPAN

MR. J. C. ULWICK
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. S. ULWICK
ADDRESS UNKNOWN

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. K. UMEHASHI
MATSUSHITA COMMUNICATION INDUSTRIAL COMPANY, LIMITED
TSUNASHIMA, YOKOHAMA, JAPAN

DR. JAMES H. UNDERWOOD
CODE 682
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. L. UNGER
SPACE RESEARCH INSTITUTE
KRONENSTR. 13
D 78 FREIBURG IM BREISGAU,
FED. REP. OF GERMANY

DR. EIGEL UNGSTRUP
DANISH SPACE RESEARCH INSTITUTE
LYNGBY DIVISION
LUNDTOFTEVEJ 7, 2800 LYNGBY
COPENHAGEN, DENMARK

UNIVERSITY OF ILLINOIS
URBANA, ILLINOIS 61801
UNITED STATES

UNIVERSITY OF WISCONSIN
MADISON, WISCONSIN 53706
UNITED STATES

MR. UNLAUFT
ADDRESS UNKNOWN

MR. ARIYN E. UNZICKER
CODE 7125.5
US NAVAL RESEARCH LABORATORY
WASHINGTON, D.C. 20390
UNITED STATES

MR. S. URIMOTO
MEISEI ELECT. CO.
TOKYO, JAPAN

USAF CAMBRIDGE RESEARCH LABORATORIES
CRMPLR STOP 29
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. A. UYEDA
YOKOGAWA-HEWLETT-PACKARD LIMITED
HACHIOJI
TOKYO, JAPAN

DR. GIUSEPPE S. VAIANA
AMERICAN SCIENCE AND ENGINEERING, INCORPORATED
11 CARLTON STREET
CAMBRIDGE, MASSACHUSETTS 02142
UNITED STATES

MR. H. F. VANBEEK
LABORATORY FOR SPACE RESEARCH
BENELUXLAAN 21
UTRECHT, NETHERLANDS

DR. ROGER P. VANCOUR
SPACE PHYSICS LABORATORY, CODE PHG
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. L. VANSPEYBROECK
AMERICAN SCIENCE AND ENGINEERING, INCORPORATED
11 CARLTON STREET
CAMBRIDGE, MASSACHUSETTS 02138
UNITED STATES

MR. E. VASSY
ADDRESS UNKNOWN

PROF. J. VELDKAMP
KONINKLIJK
NETHERLANDS METEOROLOGICAL INSTITUTE
DE BILT, NETHERLANDS

MR. S. VERMA
UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS 60637
UNITED STATES

MR. J. VISENTIN
UNIVERSITY OF TORONTO
TORONTO, ONTARIO, CANADA

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. E. L. VOGAN
UNIVERSITY OF WESTERN ONTARIO
LONDON, ONTARIO, CANADA

MR. B. VOLTA
LABORATORY OF COSMIC RADIATION
NATIONAL UNIVERSITY OF TUCUMAN
AYACUCHO 482
SAN MIGUEL DE TUCUMAN, ARGENTINA

DR. ULF VON ZAHN
PHYSICAL INSTITUTE
BONN UNIVERSITY
NUSSALLEE 12, 53 BONN
FED. REP. OF GERMANY

MR. R. C. VONBORSTEL
OAK RIDGE NATIONAL LABORATORY
PO BOX X
OAK RIDGE, TENNESSEE 37831
UNITED STATES

MR. M. WADA
MATSUSHITA COMMUNICATIONS INDUSTRIAL COMPANY, LIMITED
TSUNASHIMA
YOKOHAMA, JAPAN

MR. JOHN H. WAGER
UNIVERSITY OF BIRMINGHAM
DEPARTMENT OF ELECTRON PHYSICS AND SPACE RESEARCH
BIRMINGHAM B15 2TT, ENGLAND

DR. R. W. WALKER
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. RUSSELL G. WALKER
OPTICAL PHYSICS LABORATORY, CODE OPI
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. ROGER WALLACE
HEALTH PHYSICS DEPARTMENT
LAWRENCE RADIATION LABORATORY
BERKELEY, CALIFORNIA 94720
UNITED STATES

MR. N. WATANABE
OSAKA CITY UNIVERSITY
OSAKA, JAPAN

MR. S. WATANABE
INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH
UNIVERSITY OF TOKYO
MEGURO-KU, TOKYO, JAPAN

MR. T. WATANABE
GEOPHYSICAL RESEARCH LABORATORY
FACULTY OF SCIENCE
UNIVERSITY OF TOKYO
YAYOI, BUNKYO-KU, TOKYO, JAPAN

MR. Y. WATANABE
INSTITUTE OF SPACE AND AERONAUTICAL SCIENCE
UNIVERSITY OF TOKYO
MEGURO-KU, TOKYO, JAPAN

DR. JOHN WATERS
AMERICAN SCIENCE AND ENGINEERING INCORPORATED
11 CARLTON STREET
CAMBRIDGE, MASSACHUSETTS 02142
UNITED STATES

MR. D. WATSON
LEICESTER UNIVERSITY
LEICESTER, ENGLAND

DR. A. H. WEBER
PHYSICS DEPARTMENT
SAINT LOUIS UNIVERSITY
221 NORTH GRAND BOULEVARD
SAINT LOUIS, MISSOURI 63103
UNITED STATES

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. RICHARD R. WEBER
CODE 693
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. LAWRENCE H. WEEKS
ATMOSPHERIC STRUCTURE BRANCH
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. J. E. WELKER
CODE 625
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. CHARLES S. WELLER, JR.
CODE 7127.2
US NAVAL RESEARCH LABORATORY
WASHINGTON, D.C. 20390
UNITED STATES

DR. EUGENE M. WESCOTT
GEOPHYSICAL INSTITUTE
UNIVERSITY OF ALASKA
COLLEGE, ALASKA 99701
UNITED STATES

MR. E. WESCOTT
ADDRESS UNKNOWN

MR. E. J. WEST
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

DR. L. H. WESTERLUND
COMMUNICATIONS SATELLITE CORPORATION
BOX 115
CLARKSBURG, MARYLAND 20734
UNITED STATES

MR. H. A. WHALE
RAYMOND ENGINEERING LABORATORY
MIDDLETOWN, COLORADO 06457
UNITED STATES

DR. B. A. WHALEN
PHYSICS DIVISION
NATIONAL RESEARCH COUNCIL
100 SUSSEX DRIVE
OTTAWA 1, ONTARIO, CANADA

MR. WILLIAM WHEELER
VARIAN ASSOCIATES
611 HANSEN WAY
PALO ALTO, CALIFORNIA 94303
UNITED STATES

DR. ELDEN C. WHIPPLE
CODE R44
NOAA ENVIRONMENTAL RESEARCH LABORATORY
BOULDER, COLORADO 80302
UNITED STATES

MR. WILLIAM A. WHITE
CODE 410
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. G. WIBBERENZ
INSTITUTE FOR KERNPHYSIK
FED. REP. OF GERMANY

MR. H. U. WIDDEL
ADDRESS UNKNOWN

MR. H. WIEDER
ADDRESS UNKNOWN

DR. T. WIESEL
LUND OBSERVATORY
S-222 24 LUND, SWEDEN

DR. P. J. L. WILDMAN
METEOROLOGICAL OFFICE
LONDON ROAD
BRACKNELL, BERKS, ENGLAND

DR. K. WILHELM
MAX-PLANCK-INSTITUTE FOR AERONOMY
ABT. FUR WELTRAUMPHYSIK
3411 LINDAU-HARZ, FED. REP. OF GERMANY

SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. F. WILHUSEN
UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302
UNITED STATES

DR. THOMAS C. WILKERSON
SPACE SCIENCES BUILDING
UNIVERSITY OF MARYLAND
COLLEGE PARK, MARYLAND 20740
UNITED STATES

MR. LLOYD A. WILLIAMS
CODE 321
NASA GODDARD SPACE FLIGHT CENTER
GREENEELT, MARYLAND 20771
UNITED STATES

PROF. E. R. WILLIAMS
DEPARTMENT OF PHYSICS
UNIVERSITY COLLEGE OF WALES
PENGLAIS
ABERYSTWYTH, CARDIGANSHIRE, WALES

DR. PETER A. WILLMORE
MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

DR. B. G. WILSON
SIMON FRAZER UNIVERSITY
BURNABY, BRITISH COLUMBIA, CANADA

DR. JOSEPH W. G. WILSON
DEPARTMENT OF ELECTRON PHYSICS
UNIVERSITY OF BIRMINGHAM
PO BOX 363, EDGBASTON
BIRMINGHAM 3152TT, ENGLAND

DR. R. WILSON
ASTROPHYSICAL RESEARCH UNIT
CULHAM LABORATORY
SCIENCE RESEARCH COUNCIL
ABINGDON, BERKSHIRE, ENGLAND

MR. MORGAN WILSON
ADDRESS UNKNOWN

PROF. JOHN R. WINCKLER
SCHOOL OF PHYSICS
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455
UNITED STATES

MR. M. WINDSOR
ADDRESS UNKNOWN

MR. L. WINKLER
CODE 740
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

DR. GEORG WITT
INSTITUTE OF METEOROLOGY
UNIVERSITY OF STOCKHOLM
PO BOX 1911
S-104 32 STOCKHOLM 19, SWEDEN

MR. WILLIAM R. WITT, JR.
CODE 702
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. M. WITTE
INST. FOR PURE + APPLIED NUCLEAR PHYS.
CHRISTIAN-ALBRECHTS UNIVERSITY OF KIEL
OLSHAUSENSTR. 40/60, GEBAUDE 32
23 KIEL, FED. REP. OF GERMANY

MR. ROMEO WLOCHOWICZ
ASTRO PHYSICS BRANCH
NATIONAL RESEARCH COUNCIL
BUILDING M-50
OTTAWA K1A-0R8, ONTARIO, CANADA

MR. M. WONG
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. J. F. WOOD
CODE 744.2
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

# SCIENTISTS AND INSTITUTIONS CONDUCTING SCIENTIFIC EXPERIMENTS USING SOUNDING ROCKETS

MR. L. J. C. WOOLISCROFT
PHYSICS DEPARTMENT
UNIVERSITY COLLEGE LONDON
GOWER STREET
LONDON WC1, ENGLAND

DR. G. L. WRENN
MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON
HOLMBURY ST. MARY
DORKING, SURREY, ENGLAND

MR. JOHN B. WRIGHT
USAF CAMBRIDGE RESEARCH LABORATORIES
L.G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. DAVID U. WRIGHT, JR.
CODE 650.2
NASA GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771
UNITED STATES

MR. Y. YABURI
INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH
SAITAMA, JAPAN

MR. T. YABUZAKI
IONOSPHERE RESEARCH LABORATORY
KYOTO UNIVERSITY
KYOTO, JAPAN

MR. H. YAGODA
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

MR. A. YAMADA
MEISEI DENKI COMPANY LIMITED
SHINAGAWA
TOKYO, JAPAN

MR. A. YAMAGUCHI
TOKYO ASTRONOMICAL OBSERVATORY
MITAKA
TOKYO, JAPAN

MR. T. YAMAGUCHI
RESEARCH INSTITUTE OF ATMOSPHERICS
NAGOYA UNIVERSITY
NAGOYA, JAPAN

MR. H. YAMAKI
ADDRESS UNKNOWN

MR. T. YAMAKI
MEISEI DENKI COMPANY LIMITED
MEGURO-KU
TOKYO, JAPAN

MR. H. YAMAMOTO
DEPARTMENT OF PHYSICS
RIKKYO UNIVERSITY
TOSHIMAKU, TOKYO, JAPAN

MR. M. YAMAMOTO
NAGOYA UNIVERSITY
NAGOYA, JAPAN

PROF. GIICHI YAMAMOTO
GEOPHYSICAL INSTITUTE
TOHOKU UNIVERSITY
KATAHIRA-CHO
SENDAI, JAPAN

MR. C. YAMANAKA
FACULTY OF ENGINEERING
OSAKA UNIVERSITY
YAMADA-UE, SUITA
OSAKA, JAPAN

MR. T. YAMAQUCHI
NAGOYA UNIVERSITY
CHIKUSA-KU
NAGOYA, JAPAN

MR. K. YAMASHITA
NAGOYA UNIVERSITY
CHIKUSA, NAGOYA, JAPAN

MR. T. YAMASHITA
NUCLEAR ELECTRONICS AND SYSTEMS CORPORATION
TOKYO, JAPAN

MR. T. YAMASHITA
OSAKA DENPA COMPANY LIMITED
OSAKA, JAPAN

MR. T. YAMBUZAKI
DOSHISHA UNIVERSITY
KYOTO, JAPAN

MR. N. YOKOBORI
IONOSPHERE RESEARCH LABORATORY
KYOTO UNIVERSITY
KYOTO, JAPAN

MR. S. YOSHIDA
UNIVERSITY OF TOKYO
GEOPHYSICS RESEARCH LABORATORY
TOKYO,ZIP =JAPAN

MR. M. YOSHIMORI
PHYSICS DEPARTMENT
RIKKYO UNIVERSITY
TOSHIMAKU, TOKYO, JAPAN

MR. T. YOSHIMURA
ADDRESS UNKNOWN

MR. H. YOSHINO
ADDRESS UNKNOWN

MR. M. YOSHITAKE
JAPAN METEOROLOGICAL AGENCY
OTEMACHI, CHIYODA-KU
TOKYO 100, JAPAN

MR. T. YOSHIZAWA
INSTITUTE OF PHYSICAL AND CHEMICAL
RESEARCH
UNIVERSITY OF TOKYO
TOKYO, JAPAN

MR. J. M. YOUNG
US NAVAL RESEARCH LABORATORY
4555 OVERLOOK AVENUE, SW
WASHINGTON, D.C. 20390
UNITED STATES

MR. RICHARD S. YOUNG
GSFC-CODE 692
MS 239-11
NASA AMES RESEARCH CENTER
MOFFETT FIELD, CALIFORNIA 94035
UNITED STATES

MR. H. YUKITA
ADDRESS UNKNOWN

DR. V. ZACHAROV
CZECHOSLOVAKIA ACADEMY OF SCIENCES
ONDREJOV OBSERVATORY
ONDREJOV, CZECHOSLOVAKIA

MR. H. ZANCANATA
BALLISTIC RESEARCH LABORATORY
US ARMY ABERDEEN PROVING GROUND
ABERDEEN, MARYLAND 21005
UNITED STATES

PROF. A. ZARAGOZA
CUYO NATIONAL UNIVERSITY
FAC. DE INGENIERIA
SAN JUAN, ARGENTINA

MR. T. F. ZEHNPFENNING
AMERICAN SCIENCE AND ENGINEERING,
INCORPORATED
11 CARLTON STREET
CAMBRIDGE, MASSACHUSETTS 02138
UNITED STATES

MR. M. ZELYA
LABORATORY OF COSMIC RADIATION
NATIONAL UNIVERSITY OF TUCUMAN
AYACUCHO 482
SAN MIGUEL DE TUCUMAN, ARGENTINA

MR. S. ZIMMERMAN
USAF CAMBRIDGE RESEARCH LABORATORIES
L. G. HANSCOM FIELD
BEDFORD, MASSACHUSETTS 01730
UNITED STATES

DR. E. ZIPH
UNIVERSITY OF PITTSBURGH
PITTSBURGH, PENNSYLVANIA 15213
UNITED STATES

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## METEOROLOGICAL SOUNDING ROCKET DATA

A series entitled "Data Report, High Altitude Meteorological Data" is being published by the National Climatic Center (formerly the National Weather Records Center) for the World Data Center A for Meteorology. This publication includes high altitude data collected by rockets and other means and is an extension of the former series "Data Report, Meteorological Rocket Network Firings." At the present time, the data contained in the new and former series cover the period subsequent to January 1964. Figure 2, a sample page from the "Data Report, High Altitude Meteorological Data," illustrating the types of data presented and the format of presentation, is shown on the following page.

Copies of the WDC-A Data Reports have been sent to the discipline World Data Centers for Meteorology and for Rockets and Satellites. Interested scientists and scientific institutes desiring copies for their use in research should request them from:

World Data Center A
Meteorology
National Climatic Center
Asheville, North Carolina 28801 U.S.A.

Similar reports on upper-level wind data from rocketsondes are also available for 1966 through 1968 from the Experimental InterAmerican Meteorological Rocket Network (EXAMETNET). This is a cooperative program among the national space organizations of Argentina, Brazil, and the U.S.A. The data are available in the EXAMETNET Data Report Series, Annual Reports for 1966 (NASA SP-175), 1967 (NASA SP-176), and 1968 (NASA SP-231). These reports can be obtained from the National Technical Information Service, Springfield, Virginia 22151.

EXAMETNET data starting with January 1969 are included in the World Data Center A for Meteorology "Data Report, High Altitude Meteorological Data."

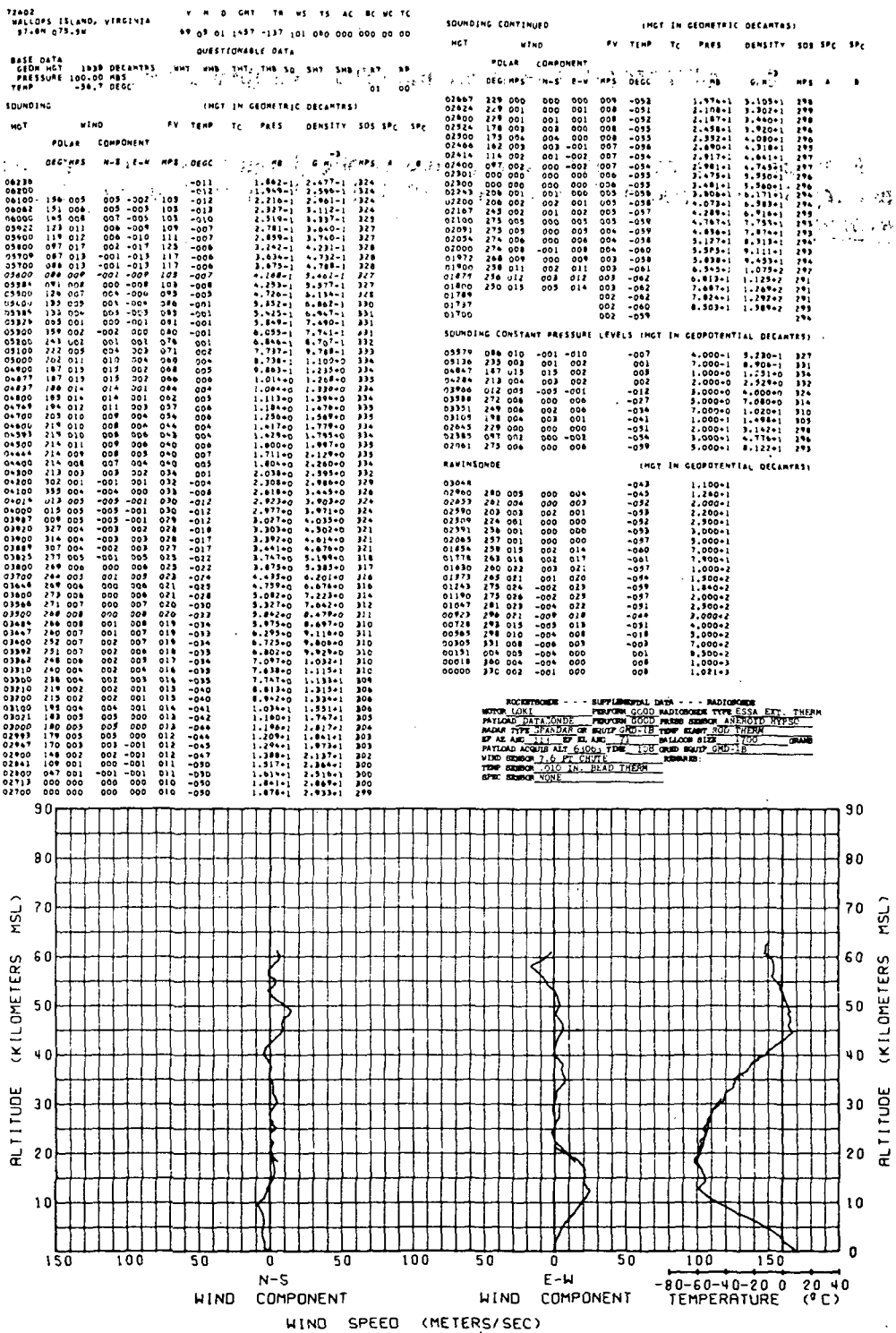



Figure 2. Sample Page from "Data Report, High Altitude Meteorological Data"

## B. ARTIFICIAL EARTH SATELLITES AND SPACE PROBES

A summary of satellite and space probe launchings for the period 1 January 1970 through 31 December 1971 is given in Volume II of this Catalogue.

## C. REPORTS AND REPRINTS

This section is comprised of two listings that indicate the documents received by World Data Center A for Rockets and Satellites during the period 1 January 1970 to 31 December 1971 and is included in Volume II of this Catalogue.



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